

Ground & Urban Direction Finding Team Tasks

**This Task Guide has been edited
to include only the tasks for
*Ground Team Member 3***



24 May 2004

Developed as part of the
National Emergency Services Curriculum Project

O-0001
PREPARE GROUND TEAM INDIVIDUAL EQUIPMENT

CONDITIONS

You are a member of a ground team at home prior to a mission.

OBJECTIVE

Collect and efficiently pack all items required of a ground team member. The enclosed list is the suggested national list. Wings may have supplemented this list to suit their environment with national approval, so be sure to use your approved wing list.

TRAINING AND EVALUATION

Training Outline

1. Your individual equipment is designed to keep you functional in the field and to help you do your job.

a. Equipment is divided into two parts -- the 24-hour pack for short activities (typical field gear) and the 72 hour pack for longer duration activities (typically called base gear). This gear list was derived from the gear lists suggested by several CAP wings and other organizations including the National Association for Search and Rescue (NASAR), and modified to meet CAP needs.

1) The 24 hour pack is what you carry while searching. As its name infers, in case of an emergency, this equipment will help you survive in the wilderness for 24 hours. In addition, your 24 hour pack is part of your uniform -- when the public sees you on a mission, they will probably see you wearing your field gear. Because of this, your 24 hour pack must present a professional uniform appearance. Though packs do not need to be identical, it is advantageous for unit members to have similar 24-hour packs. Every ground team member will have this equipment.

2) The extended duration pack is designed to help you live in the field for more than one day, typically 48 to 72 hours. It includes your sleeping bag, tent, and other long term comfort items. The extended duration is not subject to uniformity -- color and size does not matter. The major constraint is how much you can carry. Even if the mission is only expected to last one day, you should always bring your base gear. You never know how long a mission will last, or whether you will go straight to another mission from the current one.

b. For your equipment to be effective, you must insure it is clean and serviceable. Occasionally you will have to replace items such as medicine, batteries or food because it has passed its expiration date.

c. You must be able to carry all your equipment at once, in case you must "hike in" to a mission base. Normally, this means leaving room in your base gear pack to stow all of your field gear.

d. Ensure your gear is properly secured -- nothing should be flapping loose where it could snag in the brush or bang against your body when moving.

e. Restrictions on Knives: You may only wear a sheath knife if authorized by your team leader. Sheath knives cannot have a blade longer than 6" or a total length of greater than 11". The sheath must adequately secure the knife and protect the wearer from the blade. If authorized, sheath knives will be worn only on the pistol belt or carried inside the pack. The following knife types are not authorized: boot knives, butterfly knives, switch blades, double edged knives, "Rambo" style survival knives, or knives with retracting sheaths. Machetes or hatchets can only be carried by senior members when needed for that specific sortie. No knives may be visible when the member is performing crash sight surveillance duty.

2. The gear list below is the minimum required equipment. Items required of trainees are marked with a "T." You may carry additional equipment subject to team leader approval and your ability to secure and carry it -- remember, you may have to walk a long way carrying it all.

a. 24 hour pack

1) On your person:

a) Complete BDU uniform with BDU cap. The BDU cap may be replaced by a hard hat or bright colored cap based on mission needs.(T)

b) Notepad and pencil (T)

c) All CAP Identification, including 101 card, 76 card, First Aid card, etc. (T)

d) Watch (T)

e) Handkerchief or Tissues

f) Vest, reflective, orange (T)

g) Comb or brush (optional, carry if needed) (T)

h) Ground Team Member's Handbook

i) Signal Mirror

j) Whistle

k) Pocket or utility-type knife, multipurpose with can opener. Swiss Army knives, Leatherman, or Gerber Tools are recommended. (T)

2) Day pack (preferably red or orange), webbed gear, or other SAR/Survival Vest (T) containing:

a) First Aid Kit, stored in zip-lock bag or other waterproof container, recommended that it consists of the following:

(1) 2 Antiseptic cleansing pads

(2) Antiseptic ointment

(3) 6 Band-Aids, various sizes

(4) Moleskin, 2" X 4"

(5) Roller bandage

(6) 2 Safety pins, large

(7) 4 gauze pads

(8) 1 Triangular Bandage

(9) Tape, first aid

(10) Any personal medication (your team leader should know what you have and where you carry it.)(T)

(11) Rubber surgical gloves (two pair minimum)

b) Survival Kit, stored in zip-lock bag or other waterproof container, consisting of:

(1) Duct tape, 5-10 feet (does not need to be a whole roll. May be wrapped around a stick.

(2) Leaf bag, large

(3) 12 wooden, waterproofed matches (T)

(4) Match container, waterproof, with striking surface

(5) 1 Chemical Light Stick, Green (T)

(6) 50' of nylon line (paracord or similar line).

c) SAR Equipment stored in zip-lock bags, consisting of:

(1) Change of socks (T)

(2) Flagging Tape, 1 roll

(3) Flashlight (with red or blue lens), with spare bulb and batteries

(4) Spare flashlight (penlight will do) (T)

(5) Insect repellent

(6) Lip balm, with sunscreen.

(7) Sunscreen lotion

(8) Tissue Paper (T)

- (9) Work Gloves, leather (T)
- (10) Interviewing Form(s), blank
- (11) 4 Moist Towelettes, clean, in foil wrapper
- (12) Change for phone calls, calling card, or cellular phone (T) to call mission base
- d) 2 meals (T)
- e) Shelter Material, preferably 8' X 10' (spare military poncho meets the need)
- f) Coat for appropriate climate, if necessary (in pack if not wearing it)(T)
- g) Poncho, (T)
- h) Canteen(s) to carry 2 quarts of water (Some wings require their personnel to have at least one one-quart canteen on a belt while the other is stored in the field pack. At least one quart of water must be carried by all personnel)(T)

i) Compass Pouch, containing compass, lensatic or orienteering (orienteering preferred).
Compass should have a "glow in the dark" dial.

j) Leader's Equipment -- only required of Ground Team Leaders

- (1) Protractor -- for map work.
- (2) Map Case (Large Zip-Loc bags can be used if necessary)
- (3) Pencil, with eraser (plus sharpener if not a mechanical pencil)
- (4) Alcohol Pens, fine tip, at least 2 colors (neither the color of your colored flashlight lens)
- (5) Some way to erase alcohol pens marks on the map case, such as alcohol swabs or a special alcohol pen eraser.
- (6) A straightedge ruler, at least 6" long (Some protractors may have a ruler as well).

(7) Ground Team Leader Handbook

b. Extended duration pack: a backpack (preferably with frame) (T) containing:

- 1) Tent (optional, if you are sharing a tent with someone else who is carrying it) (T)
- 2) Spare rank and CAP cutouts (for cadets)
- 3) 5 meals (T)
- 4) 2 Leaf Bags, large
- 5) Bag, waterproof (T), containing:
 - (a) Spare uniform,
 - (b) Underwear and socks, 3 changes (T)
- 6) Sleeping pad, foam or inflatable.
- 7) Spare boot laces.
- 8) Kit, sewing, with spare buttons.
- 9) Shoe Shine Kit
- 10) Toilet Kit, that should contain:
 - (a) Toothbrush and paste (T)
 - (b) Shaving Kit (if you shave) (T)
 - (c) Deodorant (T)
 - (d) Washcloth and soap (T)
 - (e) Towel (T)
- 11) Sleeping Bag or Bedroll appropriate to climate (T)

c. Optional Items

- (1) Rainwear, durable
- (2) Webbing, nylon, 1" wide, 20' long.
- (3) Handheld FM Transceiver (highly recommended for Ground Team Leaders)
- (4) Water Purification Tablets
- (5) Eye Protection (highly recommended)
- (6) Entrenching Tool (highly recommended for base gear)

Additional Information

More detailed information on this topic is available in Chapter 2 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student:

1. Tell the student to lay out his gear, on top of the 8' X 10' shelter material. Tell him to lay out all items in the order listed on the above list, in rows from left to right (except for the uniform the member is wearing. of course). Inspect all items for presence and serviceability.
2. After inspection of all items, tell the student to reassemble his/her field gear and put it on. Inspect for proper fit and balance.
3. Tell the student to put on all gear, base and field (field gear may be stowed in or secured to the base pack). Inspect for proper fit and balance.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| The individual: | | |
| 1. Has all required items of the 24-hour pack. | P | F |
| 2. Has all required items of the extended duration pack (GTM-2 & 1 Only). | P | F |
| 3. When worn, the 24-hour pack is secure from undue shifting, snagging or movement. | P | F |
| 4. All knives are of an approved type, and are worn correctly | P | F |
| 5. When the extended duration pack is worn (with 24-hour pack stowed, worn or secured), Items are secure from undue shifting or movement (GTM-2 & 1 Only). | P | F |

NOTE: ALL REQUIRED ITEMS MUST BE PRESENT IN ORDER FOR THE STUDENT TO PASS THIS TASK AT THE LEVEL THEY ARE TESTING FOR. ALL ITEMS MUST MATCH THE DESCRIPTIONS LISTED ABOVE. NO EXCEPTIONS OR SUBSTITUTIONS. TRAINEES ONLY HAVE TO HAVE THE ITEMS MARKED WITH A "T". TEAM LEADERS MUST HAVE ALL LEADER'S EQUIPMENT AS WELL IN ORDER TO PASS.

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0002
CONDUCT INDIVIDUAL REFIT

CONDITIONS

You are a ground team member who has just completed a sortie or has returned home following a mission.

OBJECTIVES

Correctly identify and explain the steps to be taken to prepare yourself for the next sortie or mission, using the “4 R’s”.

TRAINING AND EVALUATION

Training Outline

1. The minute a sortie or mission is completed, a team member should prepare for the next sortie or mission. This means taking care of your equipment and yourself. There is a great temptation after a hard day in the field to not worry about your equipment for a while. But on a mission, you must be prepared to leave on another sortie at a moment’s notice. Even when the mission is complete, you may be alerted for another mission within hours -- it happens!

2. As soon as you complete a sortie or mission, perform the following steps, known as the “**4 R’s**”:

a. REPLENISH

1) After a sortie, ensure you still have all required equipment. If something is missing, see if a team mate has a spare. If not, inform your team leader. He or she might be able to arrange for you to purchase the item before the next sortie. Also replenish anything you used, especially food and water. Don’t be caught without a meal in your field gear and full canteens. Also check things like flashlight batteries, medical supplies, matches, etc. These items can expire, be used up, or (for medical supplies) be damaged and no longer sterile. Inform your team leader if you need certain supplies replenished.

2) After a mission, purchase any replacements you need.

b. REPAIR

1) After a sortie, this means inspecting all your equipment to see what is broken, and making what field repairs you can. This includes repairing rips in clothing, patching holes in ponchos or tents with duct tape, etc. Make the repair now, before you need to use that item. Remove mud from boots, and polish them to maintain water resistance.

2) After a mission, this also means cleaning uniforms and other items. Dirty clothing and sleeping bags do not insulate well. Wet tents can mildew -- set them up and dry them out. Air out your sleeping bag.

c. REPACK -- after the above steps, repack your gear so you can move out at a moment’s notice. Don’t be caught with your equipment spread throughout the house (or your tent at mission base) when the call to move occurs.

d. REST - AFTER you have prepared your gear for the next mission or sortie, get a well-deserved rest. The next sortie or mission could happen at night.

3. Your team leader may also make you responsible for team equipment. Make sure that equipment gets REPLENISHED, REPAIRED, and REPACKED as well before you REST.

Additional Information

More detailed information on this topic is available in Chapter 2 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Ask the student to describe how he or she would conduct the “4 R’s” of individual refit after a sortie. Then ask how he or she would conduct the “4 R’s” after a mission.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Describes, in order, how to REPLENISH, REPAIR, REPACK and REST after a sortie. | P | F |
| 2. Describes, in order, how to REPLENISH, REPAIR, REPACK and REST after a mission. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0003
PREVENT AND TREAT HOT WEATHER INJURIES

CONDITIONS

You are part of a ground team on a mission during on a hot day. Members of your team begin to exhibit symptoms of heat-related injuries.

OJECTIVES

Take steps to prevent hot weather injuries and recognize and treat those that do occur.

TRAINING AND EVALUATION

Training Outline

1. Heat injuries (sometimes called heat stress) are the result of overexertion and dehydration. These conditions can occur at any time during the year, but are most common during the summer months with high temperatures and humidity.

2. To prevent heat stress:

a. Ensure you are drinking enough water per day. Two quarts per day is the absolute minimum on a mild day. On a hot summer day, drink 6-8 quarts a day or 1 quart an hour. Frequent sipping is better than trying to drink an entire quart at a time.

b. Monitor the color of your urine. It should be almost clear in color. If it is brown or dark yellow, you are becoming dehydrated.

c. Wear loose fitting and open clothing.

d. Do not overexert yourself. Know your limits and do not exceed them. Take frequent breaks.

e. Avoid sunburn by using sunscreen or keeping your sleeves down.

f. Watch other members of the team for beginning signs of heat stress. Immediately stop, rest and drink some water. Once a person succumbs to a heat injury, he will not be back for the rest of the day.

g. Use the buddy system -- assign everyone a partner to watch for heat stress and to monitor water intake.

3. There are three major types of heat injuries: heat cramps, heat exhaustion, and heat stroke.

a. Heat cramps are usually the first stage of heat stress. They are the result of dehydration and loss of electrolytes in body tissues.

1). Symptom of heat cramps:

a) Severe muscle cramps, usually in the legs and abdomen.

- b) General Weakness
- c) Sometimes dizziness and faintness.

2) Treatment of heat cramps:

- a) Move the patient to a cool, shady place.
- b) Provide salted water or a commercial electrolyte (i.e. Gatorade).
- c) Massage the cramped area.
- d) Apply some pressure to the cramped area, but stop if it makes the patient more uncomfortable.
- e) Apply moist towels to the patient's forehead and the cramped muscle.
- f) If symptoms worsen, immediately transport the person to a medical care facility.

b. Heat exhaustion is the next phase of heat stress (although some individuals may never develop heat cramps before going into heat exhaustion).

1). Symptoms of heat exhaustion:

- a) Rapid and shallow breathing.
- b) Weak pulse.
- c) Cold and clammy skin.
- d) Heavy perspiration
- e) Weakness and dizziness that may lead to unconsciousness

2) Treatment of heat exhaustion:

- a) Move the patient to a cool, shady place and keep him at rest.
- b) Remove enough clothing to cool (not chill) the patient.
- c) Fan the patient's skin to promote sweat evaporation.
- d) If the patient is conscious, provide salted water or a commercial electrolyte (i.e. Gatorade).
- e) Treat for shock and transport the patient to a medical care facility.

c. Heat Stroke is the final phase of heat stress. It is a life-threatening condition. It is the result of the body's absolute failure to regulate heat, and as a result the body's core temperature starts to rise (hyperthermia).

This leads to the rapid destruction of body tissues and brain cells. Permanent brain damage and death are possible outcomes of heat stroke. Even if successfully treated, it will take days for the patient to recover.

1) Symptoms of heat stroke:

- a) Deep breathing becoming progressively shallower.
- b) A rapid, strong pulse becoming weaker.
- c) Dry and hot skin
- d) Dilated pupils.
- e) Possible unconsciousness, seizures, and muscular twitching.

2) Treatment of heat stroke. The key is to cool the patient as rapidly as possible.

- a) Remove the person from any heat sources and remove clothing.
- b) If possible immerse the patient in cool water, or use cold wet towels or ice packs in the patient's armpits, groin, under neck and behind knees..
- c) Treat for shock and transport the patient to a medical care facility.

Additional Information

More detailed information on this topic is available in Chapter 2 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Ask the student to answer the questions listed below, one at a time.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| The individual: | | |
| 1. Describes three ways to help prevent heat stress | P | F |
| 2. Describes three signs of heat cramps | P | F |
| 3. Describes three treatment steps for heat cramps | P | F |
| 4. Describes three signs of heat exhaustion | P | F |
| 5. Describes three treatment steps for heat exhaustion | P | F |
| 6. Describes three signs of heat stroke | P | F |
| 7. Describes three treatment steps for heat stroke | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0004

PREVENT AND TREAT COLD WEATHER INJURIES

CONDITIONS

You are part of a ground team on a mission during on a cold day. Members of your team begin to exhibit symptoms of cold-related injuries.

OJECTIVES

Take steps to prevent cold weather injuries and recognize and treat those that do occur

TRAINING AND EVALUATION

Training Outline

1. You are part of a ground team on a mission during on a cold day. Members of your team begin to exhibit symptoms of cold-related injuries. In order to continue your mission, you must treat these injuries and prevent them from happening again.
2. Cold injuries are a result of unstopped cooling of body parts of the whole body. To prevent cold weather injuries, it is essential to remain warm and dry. If the skin is wet, it will lose heat twenty times faster than if it is dry. People who have had cold weather injuries in the past are more likely to have them again.
3. To avoid cold weather injuries.
 - a. Cover all extremities by using gloves, wool socks and a knit hat or hood over your ears.
 - b. Use the layer principle -- several loose layers of clothing keep a person warmer than one bulky item of clothing. The multiple layers trap warm air pockets, which help maintain a uniform body temperature. As you exert yourself and begin heating up, remove layers as needed. Put them back on as you cool down. Layers can include underwear, socks, thermal underwear, sweater or sweatshirt, uniform, field jacket liner, field jacket, knit hat, glove liners and gloves.
 - c. Choose clothing that will trap air pockets yet allow moisture to pass through. Wool, polypropylene and Gore-Tex are good fabric choices that remain warm when wet. Rubber or vinyl coats are extremely bad, as they hold the body's moisture in.
 - d. Avoid getting wet, especially your feet. Stay out of streams and muddy places.
 - e. Avoid overexertion that could cause you to sweat.
 - f. Identify all personnel in your team who have a history of cold weather injuries, and watch them carefully.
 - g. Change clothing when it is dirty or wet, especially socks.
 - h. Use the buddy system -- assign each person a partner. Each pair watches each other for signs of cold weather injuries.

4. The main cold weather injuries of concern to ground teams are frostbite and hypothermia.

a. Frostbite occurs in the body extremities (fingers, toes, feet, hands, tip of nose and ears) when the body part is exposed to intensely cold air or liquid. Freezing of the affected area begins and ice crystals begin forming in the skin. In severe cases, the body tissue dies and gangrene sets in, leading to the loss of the body part. Frostbite usually takes time to develop, but most people are unaware that it has begun. Frostbite occurs in two stages that have different treatments:

1) Early Stage of Frostbite:

a) Symptoms:

- (1) Skin turns from red to white and waxy.
- (2) Numbness in the affected area

b) Treatment: Warm the affected area using body heat. Hands and feet can be placed in another team member's armpit for warmth. Patient will probably sense tingling or burning in the affected area as it is re-warmed. **DO NOT MASSAGE A FROSTBITTEN BODY PART.**

2) Later Stage of Frostbite (if early stage is not treated)

a) Symptoms: Skin turns mottled or blotchy, yellow, and finally greyish-blue

b) Treatment:

- (1) Transport the patient to medical care immediately.
- (2) If transport is not immediately available, immerse the affected area in warm (not hot) water until circulation and re-warming occur. Do not let the affected part touch the sides of the container the body part is immersed in. **DO NOT MASSAGE A FROSTBITTEN BODY PART.**

b. Hypothermia is the systemic cooling of the entire body. The body's core temperature falls below average and starts affecting the body's circulatory system. Like frostbite, hypothermia has two stages that require different treatments:

1) Early Stage of Hypothermia:

a) Symptoms:

- (1) Uncontrollable shivering.
- (2) Numbness.

b) Treatment:

- (1) Keep the patient warm and dry.
- (2) Remove wet clothing.

(3) Warm the central body before the extremities, to keep blood from flowing away from the major organs. If available, place hot packs on the neck, in the armpits, and in the groin.

2) Later Stage of Hypothermia (if early stage is not treated)

a) Symptoms:

- (1) Drowsiness, inability to perform simple actions.
- (2) Slow pulse and breathing rate.
- (3) Failing eyesight and a “glassy stare.”
- (4) Finally, unconsciousness

b) Treatment:

- (1) All treatment steps for early hypothermia
- (2) Handle the patient gently, and place in a head-down position.
- (3) Transport the patient to medical care immediately.

Additional Information

More detailed information on this topic is available in Chapter 2 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Ask the student to answer the questions listed below, one at a time.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Describes three ways to help prevent cold injuries | P | F |
| 2. Explains the layer principle | P | F |
| 2. Describes two signs of early frostbite | P | F |
| 3. Describes the treatment for early frostbite | P | F |
| 4. Describes the sign of late frostbite | P | F |
| 5. Describes two treatment steps for late frostbite | P | F |
| 6. Explains that you never massage a frostbitten body part | P | F |
| 7. Describes two signs of early hypothermia | P | F |
| 8. Describes three treatment steps for early hypothermia | P | F |
| 9. Describes two signs of late hypothermia | P | F |
| 10. Describes three treatment steps for late hypothermia | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0101
IDENTIFY NATURAL HAZARDS

CONDITIONS

You are part of a ground team moving through the wilderness.

OBJECTIVES

Recognize and avoid the various types of natural hazards.

TRAINING AND EVALUATION

Training Outline

There are three categories of natural hazards: terrain, plants and animals.

1. Terrain

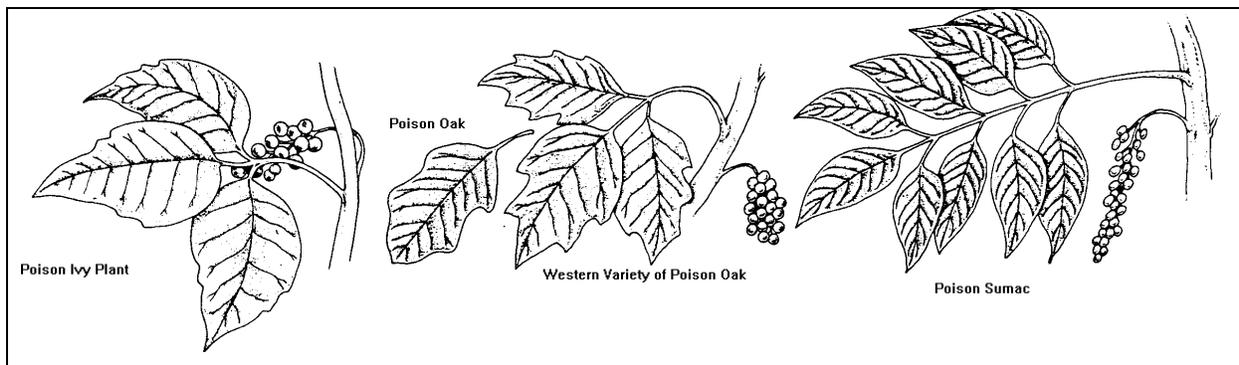
a. Cliffs and steep terrain. These can often be identified on maps by closely spaced contour lines. Choose routes around these features. If you must search the area, search parallel to the slope, rather than climbing or descending it.

b. Drainage and flood areas. These are sometimes marked on maps. Avoid moving through these areas. If the search requires you, ensure your team is properly dressed, and exercise extreme care.

c. Rough terrain, such as boulder fields. You will often have to search through these areas. Slow your rate of movement to allow all team members to exercise proper caution.

2. Plants. Search teams can avoid most poisonous plants simply by not eating any berries or wild plants. There are, however, "irritant" plants that can affect team members who touch them. All three can cause an irritating rash that may take one to three days to develop.

a. There are three irritant plants -- poison ivy, poison oak, and poison sumac:



1) Poison ivy is an irritant vine that grows close to the ground and along the trunks of trees. The vine has green almond shaped leaves in sets of three, and is prevalent in the spring through the fall.

2) Poison oak is very similar to poison ivy, with green, three leafed vines. However the leaves are broader and flatter.

3) Poison sumac is a similar plant, but the leaves can come in sets of nine to ten or more and there are small red berries attached to the plants.

b. To avoid exposure to these plants:

1) Cover exposed skin when in the woods (long sleeves, gloves, etc.).

2) Do not handle any plants or vines unnecessarily.

3) To avoid poison ivy and oak, remember the adage “IF LEAVES ARE THREE, LET THIS PLANT BE.”

4) If you are exposed to one of these plants, wash the affected area thoroughly to remove any resin from the plant on the skin. If you have resin on your clothes, change them as well.

3. Animals. Ground teams avoid any animals in wilderness areas.

a. There are certain animals that do represent a direct hazard to humans who disturb them.

1) Rodents. Raccoons, skunks, squirrels, rats and possums fall into this category. The main danger from these animals is that they carry rabies. In addition, skunks will use its scent sprayer if cornered.

a) Identification: All are four legged, small and furry. Skunks are black with a white stripe down the length of their backs.

b) Avoidance:

(1) Do not put your hands or feet under logs or into holes where these animals may have nests.

(2) Give all small, furry animals a wide berth. Do not attempt to pet, feed or provoke any animal in its own habitat.

2) Insects. Bees, wasps, mosquitoes, and fire ants are stinging insects that tend to plague searchers in the wilderness. To avoid these insects :

a) Be watchful for bees' and wasps' nests and fire ant hills, and do not disturb them.

b) Dispose of trash properly to avoid attracting insects.

c) If you are allergic to bees stings, carry your medication and ensure everyone on your team is aware of your condition and where your medication is.

d) The only way to avoid mosquitoes is with an appropriate insect repellent. Apply repellent to all areas of exposed skin, especially around wrists, ankles, arms, legs and neck. Do not spray repellent directly on your face; instead spray it on your hands and rub it on your face. Be careful with repellent on your forehead - sweat can make it drip into your eyes. You can spray repellent to the brim of your hat instead of your forehead.



Fire Ant



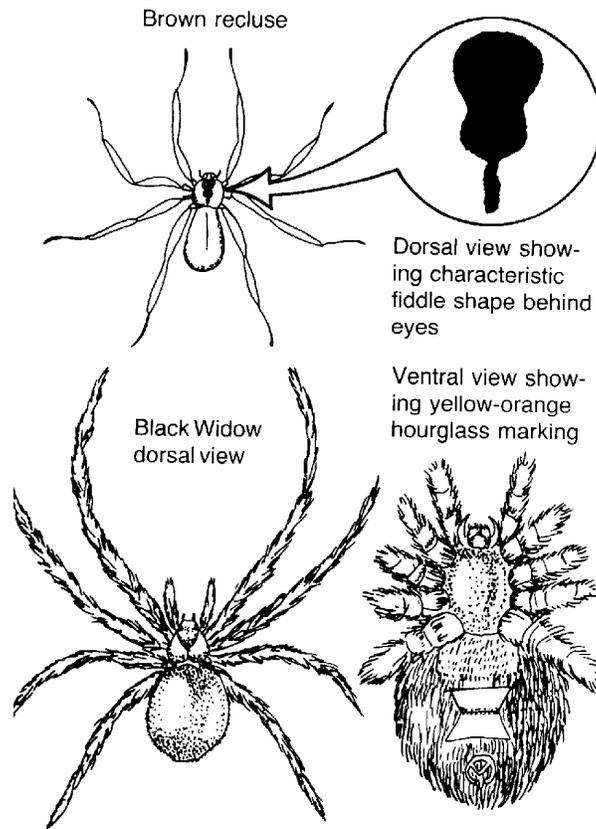
Honey/Bumble Bee



Wasp

3) Spiders. Spiders tend to be more of a nuisance than a danger. Only two spiders in North America are considered poisonous - the Black Widow and the Brown Recluse. The bite of either of these spiders is painful but rarely fatal. Approximately 5% of the population will have an allergic reaction to the bite and a few people may develop shock. Hypersensitive people will develop anaphylactic shock that can become life threatening.

a) Identification: The black widow is a ground dwelling spider found mostly in the Western United States. It is black with a yellow-orange hourglass marking on its underside. The brown recluse another ground dwelling spider. It is furry and brown, with a dark fiddle-shape mark on it's back right between the eyes.



Identification of Brown Recluse and Black Widow.

b) Avoidance:

(1) Don't put your hands anywhere you haven't looked first.

(2) Avoid contact with all spiders.

4) Snakes. Approximately 50,000 people per year are bitten by snakes in the US, with poisonous snakes accounting for 15% of these bites. Even with over 7,500 poisonous snake bites per year, fewer than 10 people die per year (less than the number from bee and wasp stings). There are two kinds of poisonous snakes in the US: pit vipers and neurotoxic snakes. Pit vipers are distinguished by the small pit in the snake's head directly between the eyes. This pit is essentially a heat sensor that the snake uses to find warm-blooded creatures. Pit vipers have long fangs, that are used to bite and inject poison into the victim. The poison is carried by the blood to other body tissues. Neurotoxic snakes are similar, but their poison affects the nervous system rather than the blood stream.

a) Identification. In the US, there are three common types of pit vipers (water moccasins, rattlesnakes, and copperheads) and one neurotoxic snake (coral snake):

(1) Water Moccasins. Water moccasins are dark snakes often called cottonmouths because of the bright white interior of their mouths when fully opened. They are usually found in lakes, ponds, swamps, and rivers.

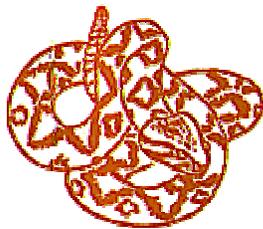


Cottonmouth / Water Moccasin

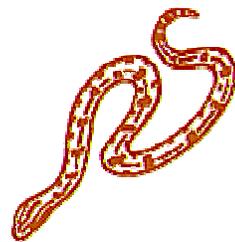
(2) Rattlesnakes. Rattlesnakes are usually dark or brown snakes noted for the rattle on the tail. The rattle is used to distract prey or as a warning when the snake is cornered. It can be easily heard when you get close to the snake. They are also known as diamondbacks because of the colored patterns formed on their backs.



Canebrake Rattlesnake



Eastern Diamondback Rattlesnake



Pigmy Rattlesnake

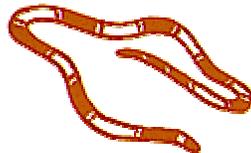
(3) Copperheads. Copperheads are brown-orange in color with alternating bands of color along their backs. Frequently, a strong "cucumber" smell is noted in the area.



Copperhead Snake



Copperhead Snake Closeup



(4) Coral Snakes. Coral snakes are small, with alternating black and red-orange bands along their length, separated by thin yellow bands. Its mouth is small, usually only wide enough to bite on a finger or a two.

Coral Snake

b) Avoidance:

(1) Avoid putting your hands and feet anywhere you haven't visually inspected, especially holes or under rocks and logs.

(2) Wear leather boots and gloves.

Additional Information

More detailed information on this topic is available in Chapter 4 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Obtain pictures (preferably color) of at least one hazardous plant, five hazardous animals, and a drawing/picture of a hazardous terrain feature.

Brief Student: Show the student the pictures, one at a time, and ask him to identify the hazard, and give two ways of avoiding it.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Correctly identifies 6 of the seven pictures | P | F |
| 2. For at least 6 of the pictures, identifies two ways of avoiding each hazard | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0102
PREVENT AND TREAT FATIGUE

CONDITIONS

Given a scenario in which the individual has been operating in the field for some time.

OJECTIVES

Recognize and react to fatigue symptoms in yourself and others.

TRAINING AND EVALUATION

Training Outline

1. Search and rescue operations are frequently conducted in adverse weather and terrain conditions and at night. These are all conditions that will accelerate fatigue in individual team members and leaders. At a minimum, team member fatigue results in reduced search effectiveness due to a lack of concentration. More serious results are endangering yourself and others in the field. Vehicle operators are especially susceptible to fatigue, sometimes with tragic results. The chances of field injuries are also greatly increased.

2. Fatigue symptoms should be recognized by all team members. Recognize them in yourself and others so that you know when you have to stop and rest. Some symptoms are:

- a. Inability to concentrate.
- b. Slurring words, incomplete sentences and speech patterns.
- c. 'Bloodshot' eyes and haggard expressions
- d. Inability to walk properly.
- e. Drooping eyelids.
- f. False energy or 'slap happiness'.

Individuals showing these signs are ineffective as searchers and represent dangers to themselves and other

3. Ways of preventing or relieving fatigue are:

- a. Taking frequent breaks or catnaps when not on duty.
- b. Eating light snacks through the day.
- c. Changing seating arrangements in vehicles regularly.
- d. Ensuring that team members sleep for as long as possible during the night or when off duty (at least 6 to 8 hours per night).
- e. Eating complete meals and ensuring adequate water intake.
- f. Sit, lay down, rest, sleep whenever possible.

g. Do not engage in unnecessary physical activity when waiting for an assignment.

h. Use the buddy system - assign members in pairs. Each member of the pair watches the other for signs of fatigue.

i. If a member of the team shows signs of fatigue, take them off duty and allow them to rest until they can be effective searchers.

Additional Information

More detailed information on this topic is available in Chapter 4 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Ask the student to identify four fatigue symptoms, and three ways to relieve fatigue.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Identifies four fatigue symptoms | P | F |
| 2. Identifies three ways to relieve fatigue | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0103
CONDUCT FIELD SANITATION AND HYGIENE

CONDITIONS

You are part of a ground team on an extended mission in the field.

OJECTIVES

Throughout the mission, take measures for:

1. Care of the feet.
2. Avoiding unpurified water.
3. Proper disposal of waste.
4. Proper personal hygiene.

TRAINING AND EVALUATION

Training Outline

1. Proper field sanitation and hygiene will keep you and your team healthy while living and working in the field. If you become sick or injured, you are incapable of doing your job and become a burden on your team.
2. Taking Care of the Feet. As a ground team member, your feet are your primary mode of transportation. If they are not functioning, you cannot function. While anyone can walk in the woods for a while, extended operations require you to actively take care of your feet.
 - a. Before Movement.
 - 1) Make sure your boots are correctly fitted and broken in. Do not wear new boots to the field.
 - 2) Make sure your socks are clean, fitted, and free of holes and knotty darns that might rub your foot raw. Always bring extra socks and foot powder.
 - 3) Treat and protect blisters, pressure spots and infections before each sortie.
 - b. During Movement.
 - 1) Keep your feet as dry as possible. Never walk in water or mud if you can avoid it. It takes days for boots to dry out fully.
 - 2) Change damp or dirty socks as soon as possible.
 - 3) Dust your feet with foot powder to keep them dry.

4) If your feet begin to bother you, adjust your socks and boot lacing to relieve pressure on sensitive spots.

c. Blisters. If you get a blister, clean it with soap and water. Watch for signs of redness, throbbing and drainage. If this occurs, seek medical treatment.

2. Avoid unpurified water, Only drink and fill canteens from known pure water, such as from a faucet. Anything else can make you very sick. Avoid all streams and lake water. If you must purify water, get your team leader's approval and follow the instructions on whatever water purification chemicals you use (NOTE: This is as a last resort only).

3. Waste Disposal. One of the quickest ways to make you and your team sick is to improperly dispose of garbage or human waste. If this material ends up in someone's food or water, it can incapacitate everyone who ingests it. In addition, waste can draw disease carrying insects and wild animals.

a. Human Waste. Whenever possible, use bathrooms/latrines. If none are available, then dig a "cat hole" at least one foot deep. Make sure the hole is at least 100 yards down wind from any bivouac site. Also make sure your hole is not uphill from the bivouac to avoid drainage problems. After use, fill the hole back in.

b. Garbage. Only put garbage in designated trash cans and bags. If none are available, seal your garbage in plastic bags and pack it out of the field.

c. Cooking Gear. If you use reusable utensils, mess kits, canteen cups, etc., wash them with hot water and soap after each use.

4. Personal Hygiene:

a. Brush your teeth at least once a day, preferable after every meal.

b. Whenever water is available, wash your hands after using the latrine and before every meal.

Additional Information

More detailed information on this topic is available in Chapter 4 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: This task is tested over the course of an overnight field exercise. The exercise should include at least two miles of dismounted movement. You should observe the students over the course of the exercise and evaluate them at the conclusion of the exercise. Anything not directly observed (such as the use of a cathole) should be evaluated through oral questioning.

Brief Student: Inform the individuals to be tested that they will be evaluated over the course of the next 24 hours on their ability to conduct field sanitation and hygiene.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| The individual: | | |
| 1. Takes proper care of feet: | | |
| a. Before movement | P | F |
| 1) Makes sure boots are properly fitted. | | |
| 2) Makes sure boots are broken in (not new boots) | | |
| 3) Wears clean socks, free of holes and knotty darns. | | |
| b. Takes proper care of the feet during movement | P | F |
| 1) Keeps feet as dry as possible. | | |
| 2) Changes damp socks. | | |
| 3) Dusts feet lightly with foot powder. | | |
| 4) Adjusts footgear to relieve the tender spots on the feet | | |
| c. Takes care of blisters: | P | F |
| 1) Washes the blister and surrounding area with soap and water. | | |
| 2) Seeks medical treatment for painful blisters or signs of infection, such as redness, throbbing and drainage. | | |
| 2. Avoids unpurified water whenever possible. If forced to use such water, checks with the team leader and then correctly purifies the water in accordance with the water purification tablet instructions. | P | F |
| 3. Properly disposes of waste: | | |

- | | | |
|---|---|---|
| a. Properly uses cat holes to dispose of human waste. | P | F |
| 1) Digs at least one foot deep and fills it in afterwards. | | |
| 2) Digs hole at least 100 meters, downwind, and not uphill from the bivouac site. | | |
| b. Disposes of garbage only in designated containers. Otherwise, packs out all garbage in waterproof bags. | P | F |
| c. Washes all utensils, cups, mess kits, etc. with hot water and soap after use. | P | F |
| 4. Practices personal hygiene: | | |
| a. Brushes teeth daily | P | F |
| b. When water is available, washes hands after using the latrine and before eating. If not available, uses alternative method like alcohol prep pads. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0201
USE A COMPASS

CONDITIONS

Given a compass, the magnetic azimuth and distance to a destination point. Your team has been given a point to travel dismounted. You have been designated the compass person. Or, you spot an object in the distance and want to know the azimuth to that point.

OJECTIVES

1. Successfully give the magnetic azimuth to a distant object +/- 5 degrees within 2 minutes.
2. Successfully move at least 600 meter's distance along the azimuths given with enough accuracy to find coffee-can sized targets suspended at eye level within 45 minutes.

TRAINING AND EVALUATION

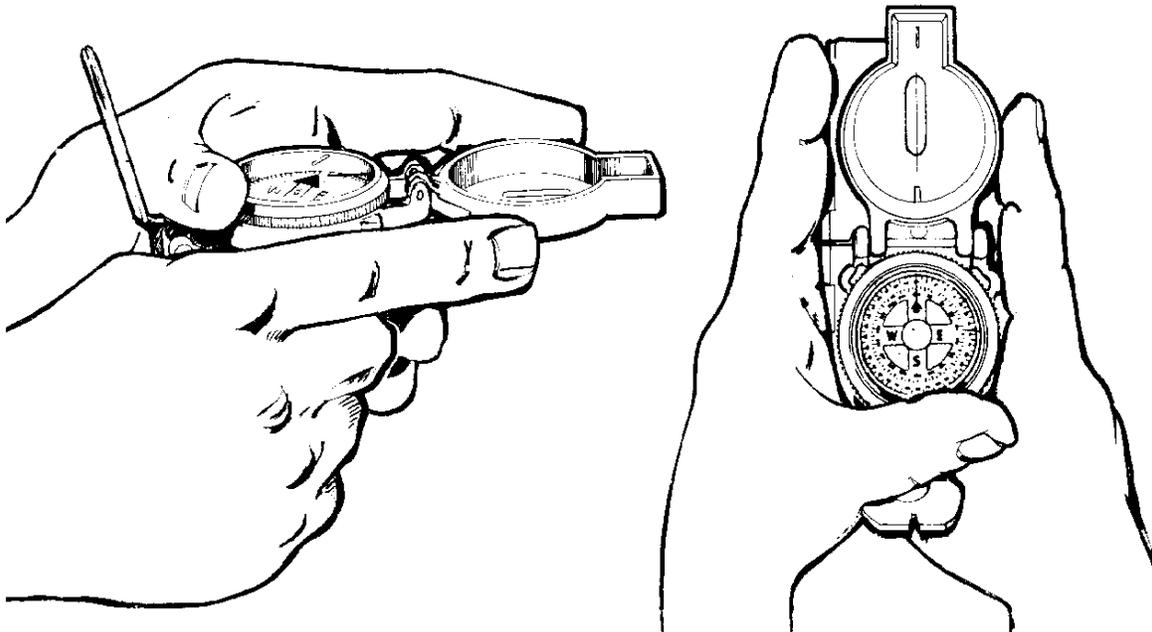
Training Outline

1. There are two techniques to holding and determining an azimuth with a compass: the Centerhold Technique and the Compass-to-Cheek Technique.

a. The Centerhold Technique can be used with lensatic or orienteering compasses.

1) If you have a lensatic compass, open it up to its fullest so the cover forms a straightedge with the base. Then move the lens (rear sight) to the rearmost position to allow the compass dial to float freely.

2) Hold the compass at waist level, with your elbows firmly against your sides, with your hands in the position shown below:



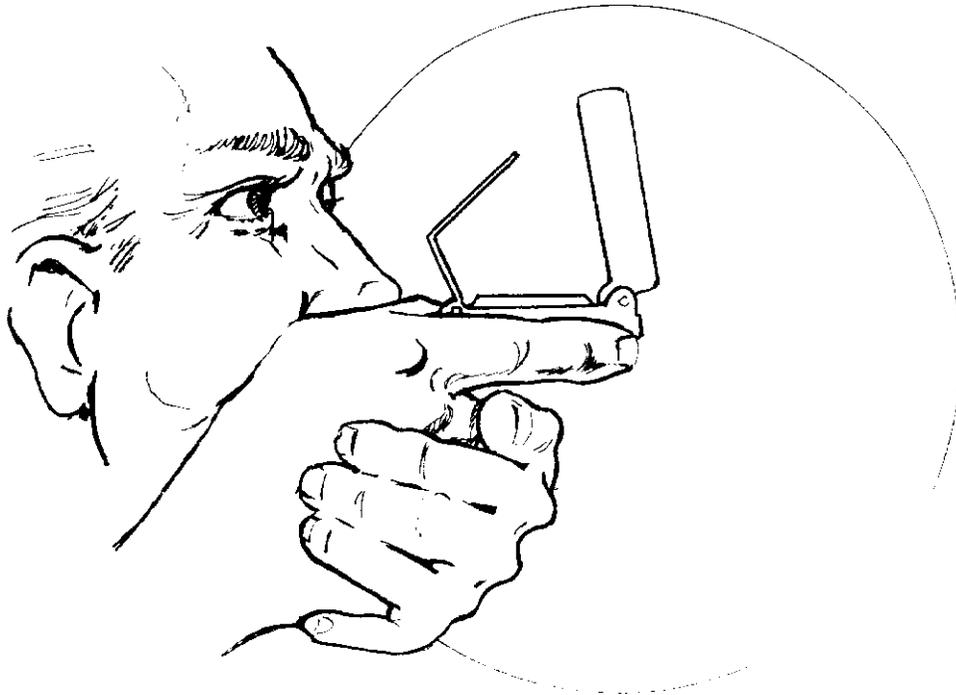
The centerhold technique used with a lensatic compass. You can hold an orienteering (Silva compass) the same way.

3) To use a lensatic compass while holding it this way, simply look down and read the number under the black reference line. This is the azimuth of the direction you index fingers are pointing.

4) To use an orienteering compass while holding it this way, rotate the compass dial until the “N” is under the needle while pointing at the target with your index fingers. Then read the dial number aligned with the “read bearing here” line. This is the azimuth of the direction you index fingers are pointing.

b. The Compass-to-Cheek Technique is typically used with a lensatic compass, though some newer orienteering compasses have sighting lenses and reference lines as well.

1) Hold the compass as shown below.



2) To use the compass when holding it this way, look through the rear sight notch and align the front sighting wire with your target. Look down through the lens one rear sight and read the number under the black reference line. This is the azimuth of the direction you are sighting.

3) This technique can be more accurate, but takes longer. If you are wearing metal glasses, they may affect the compass when held this close to your face.

2. Following an azimuth with a compass (Daylight).

a. With a lensatic compass:

1) Use the centerhold technique.

2) Rotate your body until the desired azimuth fall under the fixed black index line.

3) Turn the bezel ring until the luminous line is aligned with the north-seeking arrow. Once you obtain alignment, the compass is preset.

4) To follow an azimuth, keep the north seeking arrow aligned with the luminous line. Look along the way your fingers are pointing, and pick out a distinctive terrain feature along the azimuth and walk toward it. Occasionally recheck the compass to ensure the north seeking arrow is still aligned with the luminous line.

b. With an orienteering compass.

1) Turn the compass dial until the desired azimuth is aligned with the “Read Bearing Here” line.

2) Use the centerhold technique.

3) Rotate your body until north seeking arrow is aligned with the “N” on the compass dial.

4) To follow an azimuth, keep the north seeking arrow aligned with the “N” on the compass dial. Look along the way your fingers are pointing, and pick out a distinctive terrain feature along the azimuth and walk toward it. Occasionally recheck the compass to ensure the north seeking arrow is still aligned with the “N” on the compass dial.

3. Following an azimuth with a lensatic or orienteering compass at night is the same as daytime, except you cannot normally use terrain features for reference as you walk. Simply:

1) Use a flashlight to set the appropriate azimuth as listed under daylight compass work (above). Use a red or blue lens to avoid night blindness.

2) To follow an azimuth:

a) Orienteering Compass: To follow an azimuth, keep the north seeking arrow aligned with the “N” on the compass dial. This only works if the arrow and the “N” are luminous.

c) Lensatic Compass: To follow an azimuth, keep the north seeking arrow aligned with the luminous line.

3) Occasionally “recharge” the luminous marks by cupping your hand around a white light flashlight and the compass dial, ensuring the compass gets the light without blinding any team members.

4. At all times avoid metal objects and electrical sources. These can affect compass accuracy. The following safe operating distances are suggested:

a. High Tension Power Lines -- 55 meters.

b. Vehicles -- 10 meters

c. Telephone poles or metal fences -- 10 meters.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup:

1. Before the student arrives. Choose a wooded area where a course can be established that is at least 600 meters long. Choose a start and a finish point and turning points along the course as necessary, and determine the magnetic azimuth and distance between them. Hang a brightly covered coffee-can or similar object at eye level at the destination point and other turn points on the course. Mark the can with a large letter or number. Hang at least three other cans with different numbers at least 100 meters away from the actual destination point. Choosing a distant terrain feature that is visible from the start point as the destination target is suggested, but if necessary the evaluator may select a different terrain feature for personnel to demonstrate how to properly determine an azimuth.

2. Be sure that the individual has a compass, piece of paper, and pencil.

Brief Student: Give the individual a compass and point out a distant object. Ask him to determine the magnetic azimuth to that point. Then give him the azimuth and distance to the target can. Tell him to move to that point, and then return and tell you the number or letter written on the target.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| Determines an azimuth. | | |
| 1. Correctly uses the centerhold or compass-to-cheek technique. | P | F |
| 2. Determines the azimuth to the distant point +/- 5 degrees | P | F |
| 3. Completes the above steps within 2 minutes. | P | F |
| Follows an azimuth. | | |
| 1. Successfully moves to the target and determines it's marking. | P | F |
| 2. Completes the task in less than 45 minutes | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0202
MEASURE DISTANCE WITH PACE COUNT

CONDITIONS

Your team has been given a point to travel dismounted. You have been designated the pace person. You must ensure that the team travels the required distance and does not overshoot.

OJECTIVES

Successfully move the specified number of meters up along the route using your pace count +/- 50 meters.

TRAINING AND EVALUATION

Training Outline

1. A pace is equal to one natural step, about 30 inches long for an average adult male. In order to measure distance, you must know your pace count, which is the number of paces it takes you to cover 100 meters. You do this by measuring your pace over a pre-measured course.

a. The terrain of the course should be similar to the terrain you will be walking over on the mission. You will cover a lot more distance on a paved road than you will across rough terrain.

b. The course should be between 100 and 600 meters long, in even multiples of 100. (If the course is 600 meters long, divide your total paces by 6 to determine your 100 meter pacecount. If the course is 300 meters long, divide by 3, etc.)

2. To use your pace count:

a. Determine how far you have to travel in meters

b. Calculate how many paces this is.

1) For every hundred meters you must travel, add your pace count.

2) For the last fraction of a hundred meters, use a equal fraction of your pace count.

3) EXAMPLE: If your pacecount was 110 and the distance you had to travel was 325 meters:

$$\begin{array}{r} 110 \text{ paces (100 meters)} \\ 110 \text{ paces (100 meters)} \\ 110 \text{ paces (100 meters)} \\ + \quad 28 \text{ paces (25 meters is } 1/4 \text{ of 100 meters, so } 1/4 \text{ of your pacecount is about 28)} \\ \hline \mathbf{358 \text{ paces (325 meters)}} \end{array}$$

c. Adjust this pace count for the following factors (a shorter pace means more paces in 100 meters).

1) Slopes. Your pace will lengthen on a downslope and shorten on an upgrade. Keeping this in mind, if it normally takes you 120 paces to walk 100 meters, your pace count may increase to 130 or more when walking up a slope.

2) Winds. A head wind shortens the pace and a tail wind increases it.

3) Surfaces. Sand, gravel, mud, snow, and similar surface materials tend to shorten the pace.

4) Elements. Snow, rain, or ice cause the pace to reduced in length.

5) Clothing. Excess clothing and boots with poor traction affect the pace length.

6) Visibility. Poor visibility, such as fog, rain, or darkness, will shorten the pace.

d. Begin walking, and keep track of the distance you travel. Do not try to remember the count in your head; use a technique like one of the following:

1) Put a pebble in your pocket every time you have walked 100 meters according to your pace count.

2) Tie knots in a string.

3) Put marks in a notebook.

4) Pace counter string.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Clearly mark a route at least 500 meters long. It is best if this route has sections on different types of terrain. Put a numbered marked at the end point. Then put other numbered markers before and after the end point markers along the route. Keep the exact number and locations of these markers secret.

Brief Student: Put the student at the start point. Show him the route markings, and what the end markers looks like. Give him the distance to the end point, and tell him go that distance, get the number off the marker, and return with that number.

Evaluation

Performance measures

Results

1. Correctly identifies the end marker, or another marker within 50 meters of the end marker. P F

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0203
NAVIGATE PAST AN OBSTACLE

CONDITIONS

Given a compass. You are moving on foot following an azimuth and pace count. You encounter an obstacle that you must go around, while continuing to keep track of your azimuth and pace count.

OBJECTIVE

The team member "boxes" his steps around the obstacle, returns to the same azimuth, and continues to the destination point.

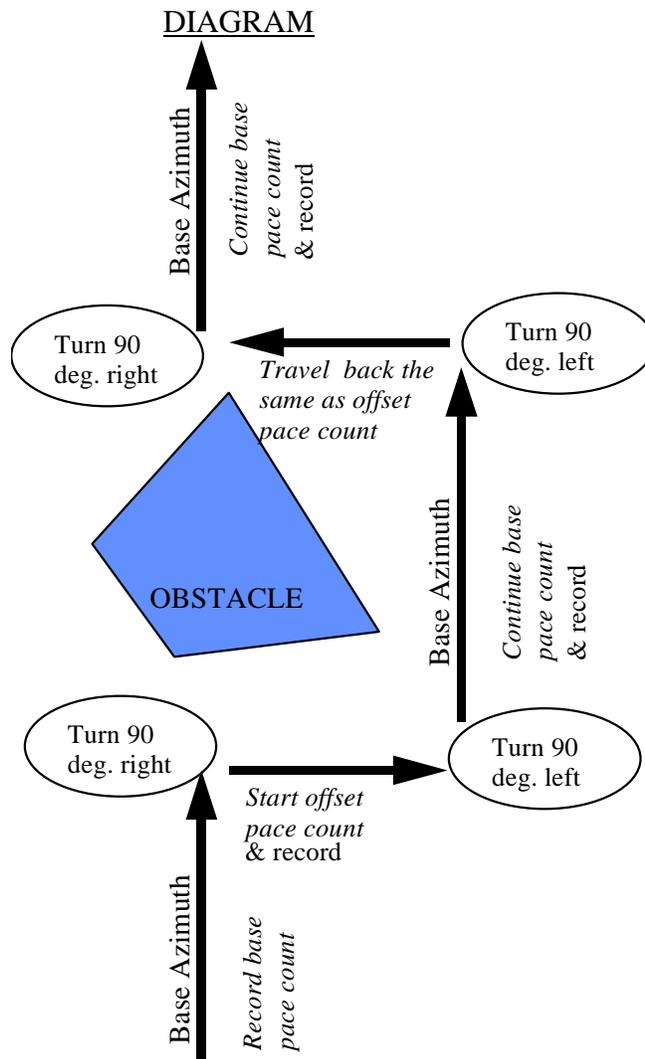
TRAINING AND EVALUATION

Training Outline

1. Spot the obstacle and halt.
2. Record pace count up to this point (hereafter called your traveling pace count)
3. Determine if it is easier to go right or left around the obstacle.
4. If you decide to go right (if you go left, switch all references to left and right):
 - a. Using the compass, turn 90 degrees to the right
 - b. Walk in that direction, starting a new pace count from zero (called the lateral pace count). Continue walking until you have moved far enough right to get around the obstacle.
 - c. Halt and record how far you've walked in this direction.
 - d. Turn left back to your original azimuth (the one you were on when you ran into the obstacle).
 - e. Look up the pace count you were at when you spotted the obstacle and halted (your traveling pace count).
 - f. Start walking along your original azimuth, adding your steps to your traveling pace count.
 - g. When you are clear of the obstacle on your left, halt and record your total traveling pace count.
 - h. Using the compass, turn left 90 degrees. Look up your lateral pace count (the number of steps you moved to the right of the obstacle).
 - i. Walk in this direction, starting a new pace count from zero. When you have walked the same distance as your recorded lateral pace count, halt. You should now be on the direct opposite side of the obstacle from where you started.
 - j. Turn right back to your original azimuth.

5. Look up your total traveling pace count.

6. Start walking along your original azimuth, adding your steps to your total traveling pace count. Continue on to your destination.



Example of Bypassing an Obstacle

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Set up a start and end point at least 400 meters apart in a wooded area. Clearly mark the destination point with a brightly colored coffee-can or similar marker hanging at eye level. Ensure there is point obstacle (pond, building, etc.) along the route of travel. Provide the ground team member with a compass, piece of paper, pencil, and the azimuth and distance to the destination. Ensure there is a point obstacle (pond, building, etc.) along the route of travel.

Brief Team Leader: Tell the team leader to move to the destination point. Warn him that there will be an obstacle along the way that must be navigated around.

Evaluation

| <u>Performance Measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Identifies the obstacle and halts and records pace count. | P | F |
| 2. Turns 90 degrees right (left) and moves clear of the obstacle and records pace count. | P | F |
| 3. Turns 90 degrees to the left (right) to the original azimuth and continues the original pace count until the obstacle is cleared while recording the pace count. | P | F |
| 4. Turns 90 degrees to left (right) and moves the same distance moved in step 2. | P | F |
| 5. Turns 90 degrees and continues from the original pace count. (sum of 1 + 3) | P | F |
| 6. Locates the destination point. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

LOCATE A POINT ON A MAP USING LATITUDE AND LONGITUDE

CONDITIONS

Given an aeronautical chart, road map, or topographical map with latitude and longitude lines. You are away from mission base, mounted or dismounted, and must locate your location on map in order to report your location to mission base, an aircraft or another ground element using latitude and longitude. Or, you are coordinating with another search element (ground or air) who has told you his location using the latitude and longitude. You want to plot this point on your map.

OBJECTIVES

Within 1 minute, the team member announces the correct latitude and longitude of the marked point (using the smallest gradations of latitude and longitude printed on the map), using correct terminology, and, within 1 minute, can plot a point on the map given the latitude and longitude orally.

TRAINING AND EVALUATION

Training Outline

1. Latitude and longitude are the objective position measurements used on aeronautical charts. Many road maps and topographical maps also are gridded using this system.
 - a. Lines of longitude run north-south on the map. Lines of latitude run east-west.
 - b. Both latitude and longitude are measured in degrees, minutes and seconds. One minute is 1/60th of a degree, and one second is 1/60th of a minute. In the continental US, latitude numbers are read from south to north (bottom to top), and longitude numbers are read from east to west (right to left)
 - c. Each line of latitude is labeled as either North (if it is above the equator) or South (if it is below the equator). Each line of longitude is labeled as East (if it is east of a longitude line called the Prime Meridian) or West (if it is west of the Prime Meridian)
 - d. To read a lat-long coordinates the symbol “°” means degrees, an apostrophe (“ ’ ”) means minutes, and a double apostrophe (“ ″ ”) means seconds. Always read the latitude before the longitude.
 - e. Example: 32° 33’ 44” N, 45° 12’ 52” E means “32 degrees, 33 minutes, and 44 seconds North Latitude, 45 degrees 12 minutes and 52 seconds East Longitude”
 - f. On larger scale maps, or when pinpoint accuracy is not required, seconds are not used. For example, 45° 12’ N, 22° 36’ W is read as “45 degrees, 12 minutes North Latitude, 22 degrees 36 minutes West Longitude.”
2. To find the lat-long designation of a known point on the map
 - a. Find the latitude:

1) Find the numbers of the latitude degree lines to the immediate north and south of the point.

Write down the lower of the two. (For example, if the point is between 45° and 46° North latitude, write down

“45°”. Also write down if that latitude line is labeled as “North” or “South” (above the equator it will always be “North”).

2) From latitude line chosen above, count up the number of minutes that the point is from the line using the tick marks on the edge of the map (or in the grids if the map is gridded) until you reach the last minute marking before your point. Write down the number of minutes.

3) From the last minute mark, count up the number of seconds to your point (if the map is of a large scale, such as an aviation chart, it will not have marks for seconds. Either stop with the minute measurement, or estimate seconds). Write down the number of seconds.

b. Find the longitude.

1) Find the numbers of the longitude degree lines to the immediate east and west of the point. Write down the lower of the two. (For example, if the point is between 22° and 23° West longitude, write down “22°”). Also write down if that longitude line is labeled as “East” or “West” (in the western hemisphere it will always be “West”).

2) From longitude line chosen above, count left the number of minutes that the point is from the line using the tick marks on the edge of the map (or in the grids if the map is gridded) until you reach the last minute marking before your point. Write down the number of minutes.

3) From the last minute mark, count left the number of seconds to your point (if the map is of a large scale, such as an aviation chart, it will not have marks for seconds. Either stop with the minute measurement, or estimate seconds). Write down the number of seconds.

c. NOTE: If the map is not marked with minutes or seconds, you will have to estimate. Remember, there are 60 minutes in a degree and 60 seconds in a minute. So, if the point is halfway between two degrees, it is at the 30 minute point. If it is one quarter the distance from one degree to another, it is at the 15 minute point. Use the same logic to determine seconds if the map is only graduated in degrees and minutes.

c. Make sure the lat-long coordinate you have written down is in the format Degrees°, Minutes', Seconds" (North or South) Latitude, Degrees°, Minutes', Seconds" (East or West) Longitude,

3. To plot a point given the lat-long coordinate:

a. Find the correct latitude line and count up the correct number of minutes and seconds (below the equator you would count down, not up).

b. Find the correct longitude line and count left the correct number of minutes and seconds (in the eastern hemisphere you would count right, not left).

c. Mark the point.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: Mark a point on a map or chart gridded with latitude and longitude, and give the map to the student. . Tell him whether or not she must report seconds, or just degrees and minutes (depends on the scale of the map). Pick a different grid location from the point and write down the latitude and longitude coordinates. Ensure you have a timer. Because this task is timed, it is necessary to make sure that the student and work area is prepared for testing. The map should be open and complete. If copies of maps are used, they should include all references normally available on the full map to take the exam.

Brief Student: Ask the student if s/he is prepared. Tell the student to tell you the latitude and longitude of the point. Then orally give him the latitude and longitude you wrote down and tell him to show you where that point is on the map.

Evaluation

Performance Measures

Results

Determining the grid of a known point. The student:

- | | | |
|--|---|---|
| 1. Announces the correct latitude degrees, minutes and seconds within tolerance (see below) | P | F |
| 2. Announces the correct latitude designation "North" or South" | P | F |
| 3. Announces the correct longitude degrees, minutes and seconds within tolerance (see below) | P | F |
| 4. Announces the correct longitude designation "East" or "West" | P | F |
| 5. Performs the above steps within 1 minute of time | P | F |

NOTE: The minimum accuracy for this task is to be within 30 seconds of the correct answer for a map graduated in minutes. If the map is large enough scale to be graduated in seconds, then the needed accuracy should be increased. For dismounted work, a ground team with proper maps should be able to plot positions within 10 seconds.

The individual determines the location of a designated grid:

- | | | |
|---|---|---|
| 6. Plots a point on the map within 1 minute using the correct latitude and longitude degrees, minutes and seconds within tolerance (see accuracy note above). | P | F |
|---|---|---|

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

LOCATE A POINT ON A MAP USING THE CAP GRID SYSTEM**CONDITIONS**

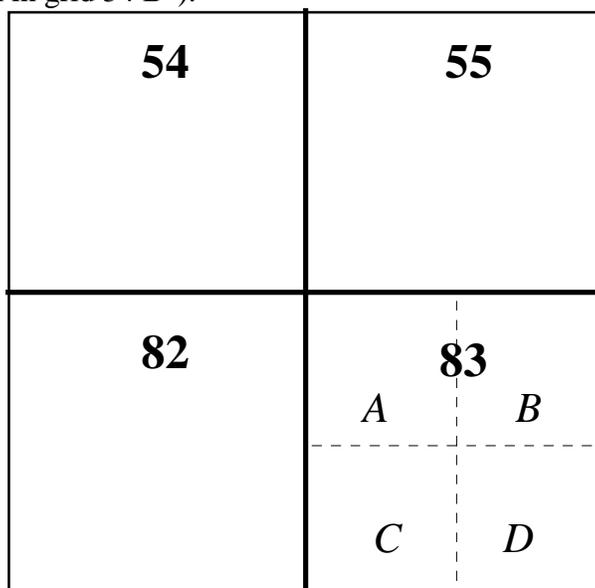
Given an aeronautical chart, road map, or topographical map gridded with the CAP grid system. You are away from mission base, mounted or dismounted, and must plot your location on a CAP gridded map in order to report it, an aircraft or another ground element. Or, you are coordinating with another search element (ground or air) who has told you his location using the CAP grid system. You want to plot this point on your map.

OBJECTIVES

Within 1 minute, the team member announces the CAP grid and sub-grid that the point is located in, using correct terminology, and can plot a point on the map given the CAP grid coordinates orally.

TRAINING AND EVALUATION**Training Outline**

1. The CAP grid system is designed for use on aeronautical charts, but can be adapted to any map with latitude/longitude markings around the edge.
2. A grid is a 15 minute latitude by 15 minute longitude box. This is done by dividing the 30 minute by 30 minute boxes already on the aeronautical chart into fourths. Each grid is identified with a number. (For example "I am located in Grid 54").
3. To locate a position more precisely, mentally divide each grid into four quadrants. The Northwest quadrant is "A", the Northeast is "B", the Southwest is "C", and the Southeast is "D". Say the quadrant letter after the grid number (for example, "I am in grid 54 B").



Example of CAP grids (54,55,82 and 83) and lettered quadrants (83A, 83B, 83C, and 83D)

4. To find the grid designation of a known point on the map

- a. Find the grid number the point is in.
 - b. Determine which quadrant of the grid the point is in (A, B, C, or D)
5. To plot a point given a grid number and quadrant letter:
- a. Find the appropriate grid on the map (the grid numbers increase as you look left to right and top to bottom on the map).
 - b. Mark the point in the appropriate lettered quadrant of that grid.

Additional Information

More detailed information on this topic is available in Chapter 5 and Attachment D of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: Mark a point on a CAP gridded map or chart and give the map to the student. Pick a different grid location from the point and write down the grid and quadrant. Ensure you have a timer.

Brief Student: Tell the student to tell you the CAP grid and quadrant designation of the point. Then orally give him the grid and quadrant of the point you wrote down and tell him to show you where that point is on the map.

Evaluation

| <u>Performance Measures</u> | <u>Results</u> |
|--|----------------|
| The individual determines the grid of a known point: | |
| 1. Announces the correct grid number and quadrant within 1 minute | P F |
| The individual determines the location of a designated grid: | |
| 2. Finds the correct numbered grid and quadrant within 1 minute | P F |
| Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly. | |

O-0209

IDENTIFY THE MAJOR TERRAIN FEATURES ON A MAP

CONDITIONS

Given a objective topographical map

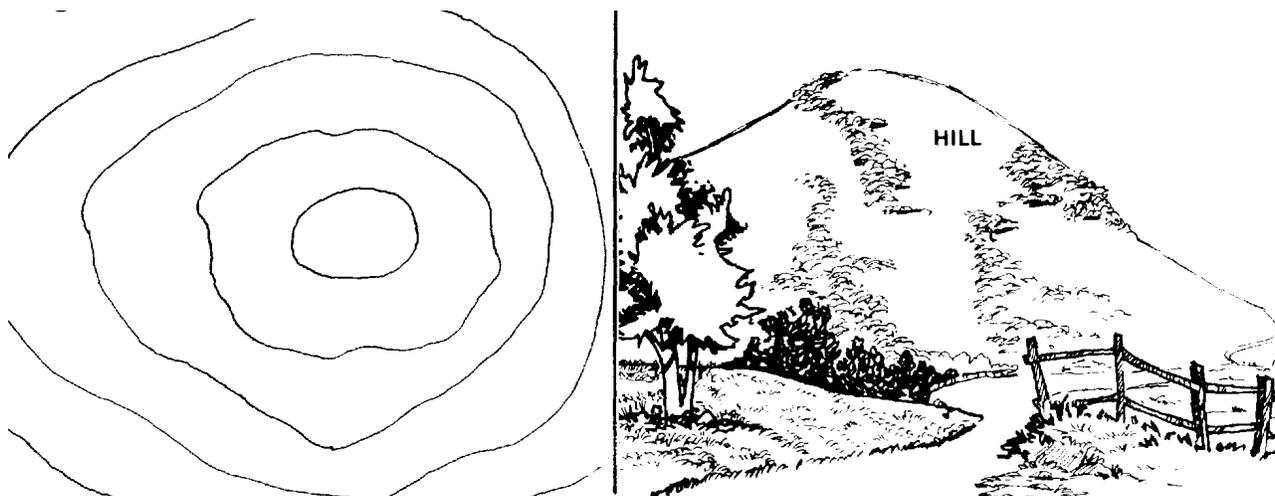
OBJECTIVES

Correctly identify the five major terrain features on the map.

TRAINING AND EVALUATION

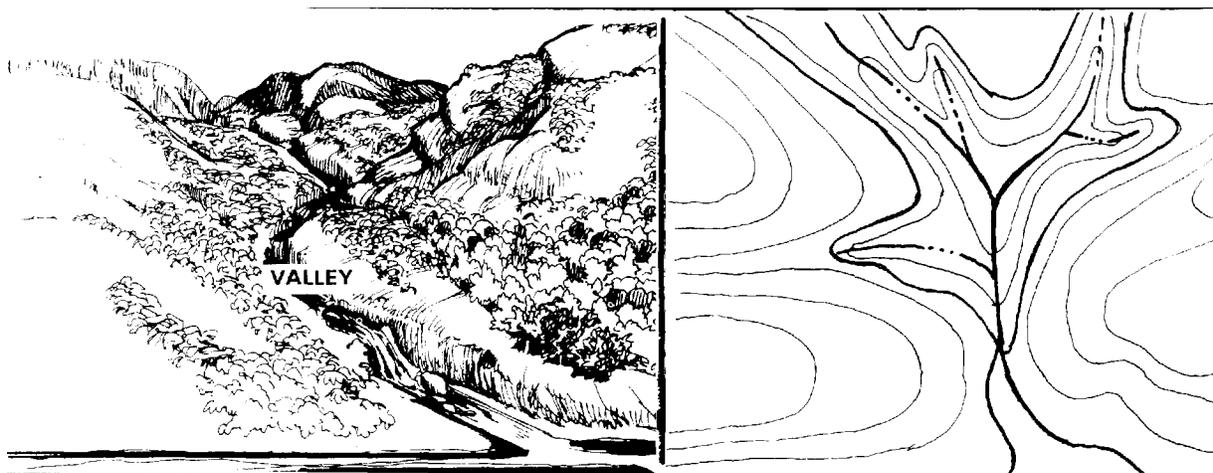
Training Outline

1. Hill -- A point or small area of high ground. From the hilltop, terrain slopes down in all directions. On the map a hill is depicted by contour lines forming concentric circles.

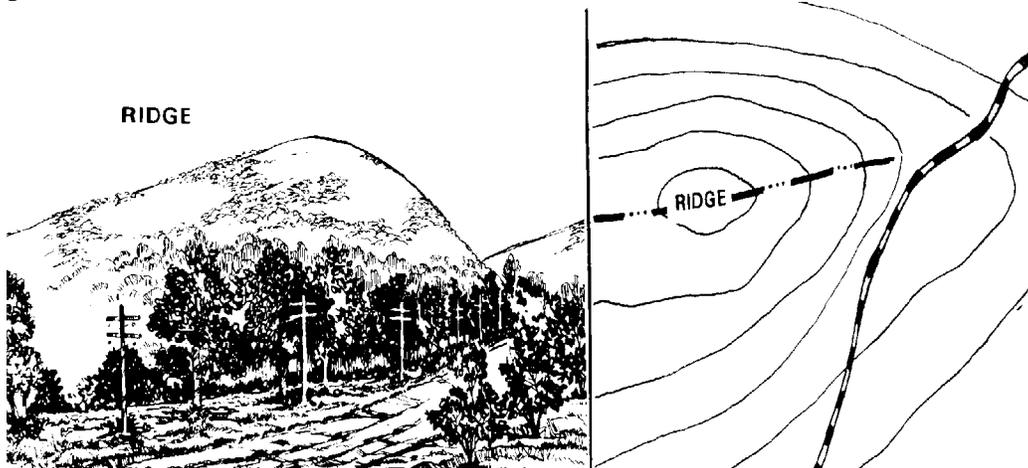


A hilltop on the map (left) and in the wilderness (right)

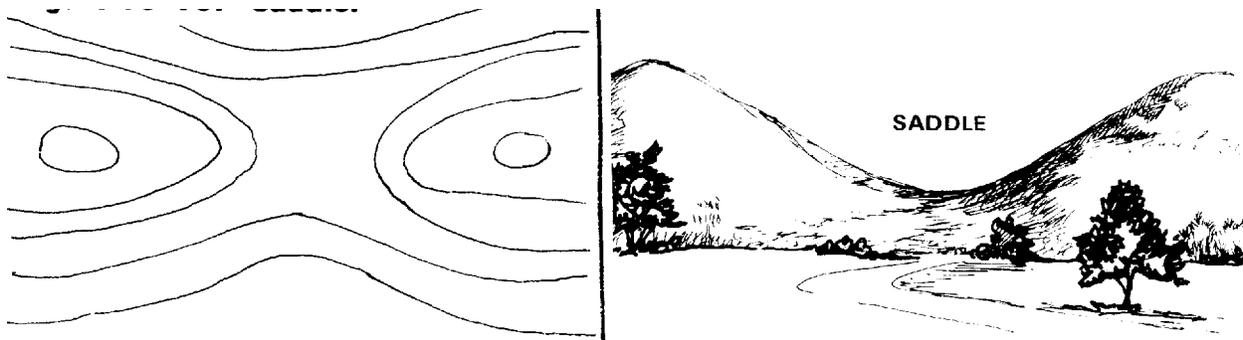
2. Valley -- Terrain goes up in three directions, and down in one, usually a river or a stream flows in it.



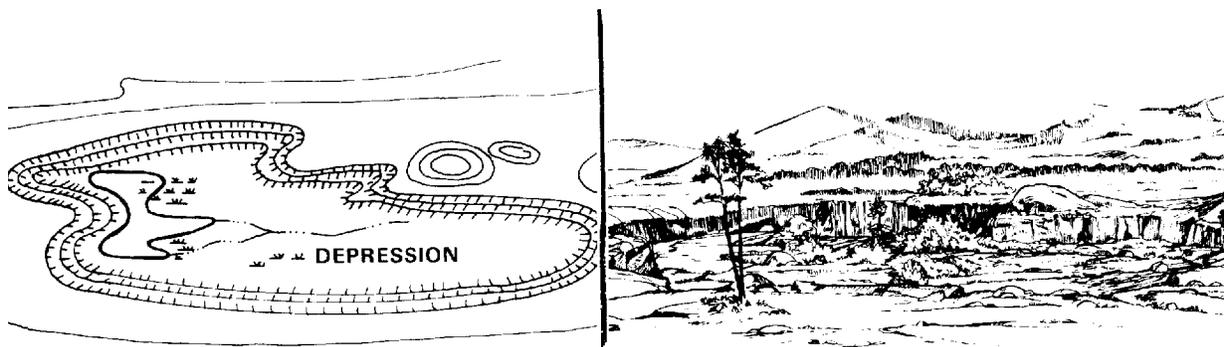
3. Ridge -- A line of high ground with height variations along its crest. The terrain slopes down in three directions and up in one.



4. Saddle -- A dip or low point, usually along the crest of a ridge. Terrain goes down in two directions and up in the other two.



5. Depression -- A low point or hole in the ground. Terrain goes up in all directions. Hash marks indicate decreasing elevation.



Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: On an appropriate topographical map, circle an example of each major terrain feature.

Brief Student: Tell the student to identify the circled items.

Evaluation

Performance measures

Results

The student correctly identifies the following:

| | | |
|---------------|---|---|
| 1. Hill | P | F |
| 2. Valley | P | F |
| 3. Ridge | P | F |
| 4. Saddle | P | F |
| 5. Depression | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0210
IDENTIFY TOPOGRAPHIC SYMBOLS ON A MAP

CONDITIONS

Given a objective topographical map

OBJECTIVE

Correctly identify the topographical symbols, colors, and marginal information on a map.

TRAINING AND EVALUATION

Training Outline

1. In order to navigate using a map, the ground team member must know how terrain features are depicted on a map.
2. Ideally, every feature on the Earth's surface can be shown on a map in its true shape and size. Unfortunately this is impossible due to the limitations on detail that can be legibly transferred to paper. The amount of detail that can be shown on a map varies as the scale of a map. Small scale map such as 1:24,000 USGS quadrangles will show considerably more detail then 1:500,000 aeronautical sectionals.
3. Symbols are used on topographical maps to show features and details. On most topographic map the following colors are used to classify these symbols.
 - a. Black -- manmade or cultural features such as buildings, roads, railroads, names and boundaries.
 - b. Blue is used for water or hydrographic features such as lakes, rivers, canals and swamps.
 - c. Brown -- used for relief or contour and to show relief features such as cuts, fills, sand dunes, and glaciers.
 - d. Green -- is used for woodland cover and vegetation such as scrub, vineyards, forests, etc.
 - e. Red -- emphasizes important roads and highways.
 - f. Purple -- used to show revisions from previous map editions.
4. The shape and size of an object on the map will indicate it's actual shape and size on the ground. A black solid square is a building and an irregular blue item is a lake or pond. Interpreting symbols is a matter of knowing what color it is and how that relates to the above list, and matching the symbol to the map's legend. The map's legend is table of symbols and what they represent. It is usually located on the bottom of the map sheet in the marginal information or it is published separately for the objective types of topographic maps in use.
5. The marginal information on a map shows the mapsheets relationship to the rest of the Earth. Marginal information includes:
 - a. The geographic location of the map.

- b. The name of the mapsheet and adjoining mapsheets.
- c. Agency preparing the map and date of printing.
- d. Scale of the map and bar scales for meters, yards, and miles.
- e. Contour interval of contour lines.
- f. Grid to magnetic north declination diagram, or simply the magnetic variation angle.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: On an appropriate topographical map, circle an example of each item of marginal information and an item shown on the map by color.

Brief Student: Tell the student to identify the circled items.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Identifies the sheet name | P | F |
| 2. Identifies the contour interval and lines | P | F |
| 3. Identifies the G-M angle declination diagram | P | F |
| 4. Identifies the legend | P | F |
| 5. Identifies the bar scales | P | F |
| 6. Identifies the adjoining sheets reference | P | F |
| 7. Identifies man-made features | P | F |
| 8. Identifies hydrographic (water) features | P | F |
| 9. Identifies vegetation features | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0211
DETERMINE ELEVATION ON A MAP

CONDITIONS

Given a objective topographical map. Your team is has been ordered to move dismounted to a destination. Before beginning movement, you want to get an idea for the “ups and downs” of the terrain you will be traveling over. Or, your team is having problems contacting mission base, and you wish to find a high point to transmit form.

OBJECTIVE

Correctly identify the elevation of any point on the map +/- 1/2 the contour interval.

TRAINING AND EVALUATION

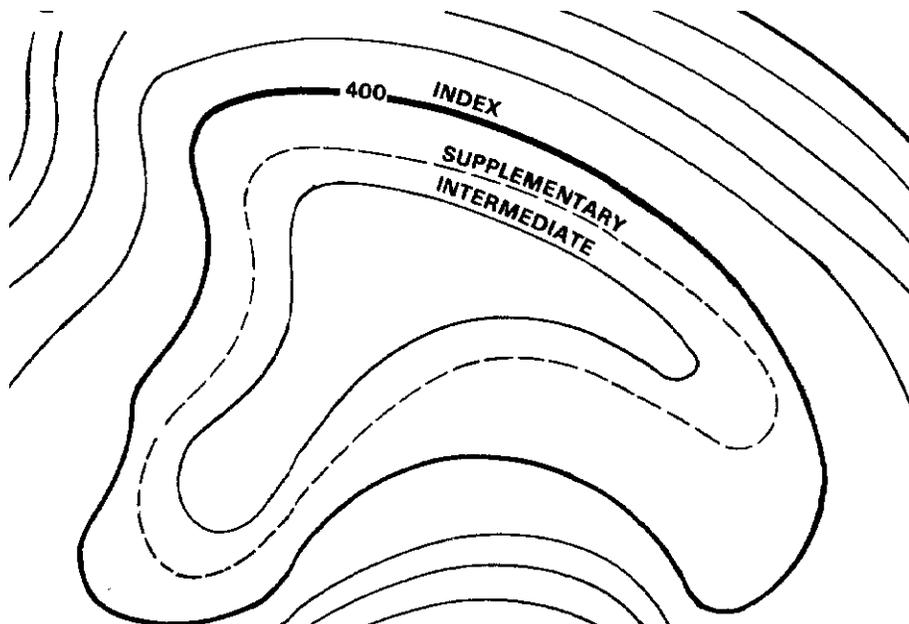
Training Outline

1. Topographical maps depict the elevation of the ground through the use of contour lines. A contour line represents an imaginary line on the ground, above or below sea level connecting points of equal elevation. Contour lines are normally brown. There a three types of contour lines:

a. Index Contour Lines are heavier than other lines, and are labeled with a number. This number is the elevation of that line, in feet, yards or meters. The top of the elevation number always points uphill.

b. Intermediate Contour Lines are the solid lines that fall between Index Contour Lines. These lines do not have the elevation listed on them, but represent increments of the *contour interval* (see 2, below).

c. Supplementary Contour Lines. These contour lines resemble dashes. They show sudden changes in elevation of at least one-half the contour interval.



Index, Intermediate, and Supplementary contour lines. As indicated by the orientation of the “400,” the terrain slopes down towards the center of this area.

2. Before you can read the contour lines, you must know the contour interval of the map. The contour interval will be printed in the marginal information, near the map legend. The contour interval is the number of feet, meters or yards that each intermediate contour line represents. (EXAMPLE: if the contour interval is 10 meters, then the Index Contour line marked with “100” is 100 meters above sea level, and each intermediate line above it is 10 more meters)

3. To determine the elevation of a point on the map:

a. Determine the contour interval of the map, and the unit of measure used (feet, meters or yards).

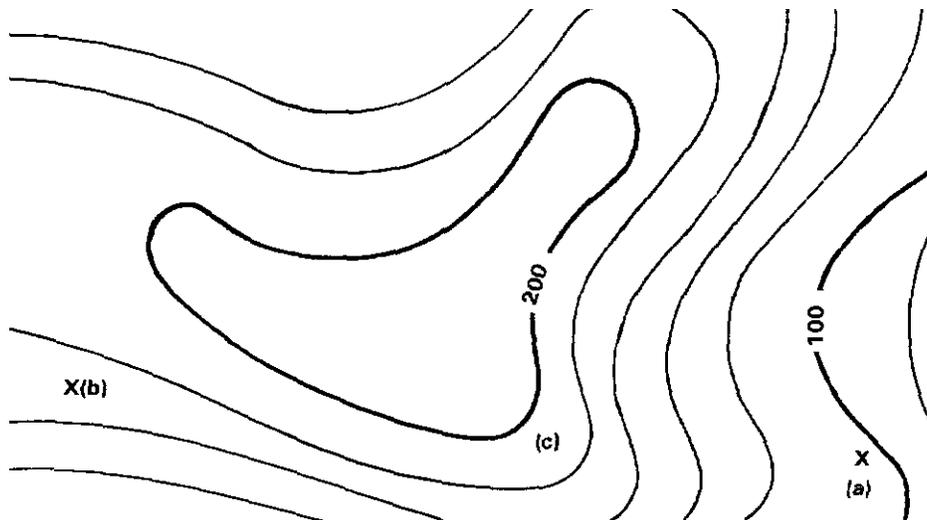
b. Find the numbered index contour line nearest the point.

c. Determine if you are going from lower elevation to higher, or vice versa. For example, if the point was somewhere between the “500” and the “600” Index contour lines, you know the terrain gets higher as it gets closer to the “600” line.

d. Start at the Index contour line below the point (in the above example, the “500” line) and count the number of Intermediate contour lines between the lower Index contour line and the point. For each intermediate line, add the contour interval.

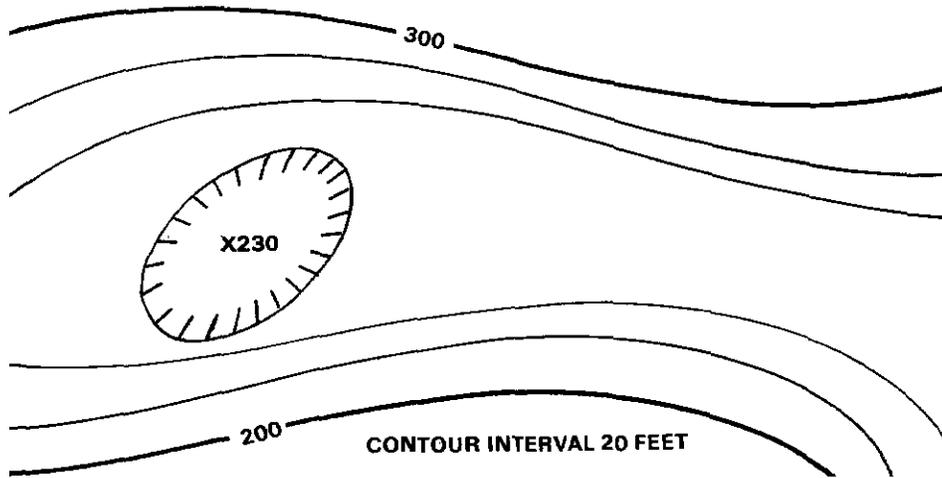
e. If the point is halfway between two contour lines, add half the contour interval.

f. If the point is a hilltop, determine the elevation of the contour line closest to the hilltop and add half the contour interval.



EXAMPLE: If the above map has a contour interval of 20 meters, point (a) is slightly above 100 meters in elevation, point (b) is at approximately 170 meters, and point (c) is at approximately 190 meters.

4. Depressions. Depressions (the opposite of a hilltop) are often marked with small hatchmarks on the contour line pointing inward towards the center of the depression. To determine the depth of the depression, determine the elevation of the innermost contour line of the depression and *subtract* half the contour interval.



Given the contour interval of 20 feet, the rim of the depression is at an elevation of 240 feet, and the center of the depression is at 230 feet.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: On an appropriate topographical map, mark five points on the map, including one hilltop and one depression.

Brief Team Leader: Tell the team leader to determine the elevation of all five points.

Evaluation

Performance measures

Results

1. Identifies the elevation of four of the five points +/- 1/2 the contour interval

P F

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0212
MEASURE DISTANCE ON A MAP

CONDITIONS

Given a objective topographical or aeronautical map with bar scales, a piece of paper, pencil, and straight edge. You are away from mission base, mounted or dismounted, and must move to another location. You have plotted your position on the map, and the position to which you are to move. Now you want to determine the distance you will have to move.

OBJECTIVES

1. Determine the straight-line distance between two points with no more than five percent error, within 2 minutes.
2. Determine the road distance between two points with no more than 10 percent error, within 2 minutes.

TRAINING AND EVALUATION

Training Outline

1. Background information:

- a. Distance can be straight line (if you are walking cross country) or along a curved road or path.
- b. Distance for mounted travel should be determined in miles, since car odometers are graduated in miles. Distance for walking should be determined in meters, so you can use your pace count. There are 0.62 miles in a kilometer (1000 meters) and 1600 meters in a mile.
- c. All topographical maps are drawn to scale (1:24,000:, 1:62,500:, etc.). This means that a one millimeter of map distance equals 24,000 millimeters (24 meters) ground distance for a objective 1:24,000 USGS quadrangle.

2. Methods of Measuring Straight-line Distance:

- a. One method of determining ground distance from a map is to use a ruler to measure the distance between two map points and multiply that by the scale factor. However, this involves doing somewhat complicated multiplication in the field.
- b. A simpler way is to use the bar scales located at the bottom of the map. These scales are usually printed in meters, yards, and miles. By taking the ruler or the edge of a piece of paper and mark on it the straight-line distance between the two map points. Then put the ruler or piece of paper under the appropriate bar scale and read the ground distance in the appropriate units.

3. To find the road distance between two points on a map, place a tick mark on edge of the piece of paper and then place the tick mark at the first point. Align the paper with the road edge until you come to a curve, mark the paper and the map at the curve. Pivot the paper so that it continues to follow the road edge to the next curve. Repeat the process until you get to the second point, where you make the final tick mark on the paper. At this point you can take the paper to the appropriate bar scales and determine the ground distance between the first and last tick marks. This will be the road distance between the two points on the map.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: On an appropriate topographical map, mark two points on the map as A and B (these points should be 3,000 to 4,000 meters apart in ground distance). On a road or trail on the map, mark two points C and D at least 3,000 meters apart ground distance. Give the student the map, a pencil, a strip of paper, and a ruler.

Brief Student: Tell the student to determine the straight-line distance between points A and B to within a 5 percent error and the road distance from C to D to within a 10 percent error.

Evaluation

Performance measures

Results

The individual calculates the Straight-line Distance:

- | | | |
|--|---|---|
| 1. Measures the straight line distance using the straight edge | P | F |
| 2. Determines the straight-line distance on the bar scale within 5 percent | P | F |
| 3. Completes the above within 2 minutes | P | F |

The individual calculates the Road Distance:

- | | | |
|--|---|---|
| 4. Measures the road distance using the piece of paper | P | F |
| 5. Determines the road distance on the bar scale within 10 percent | P | F |
| 6. Completes the above within 2 minutes | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0213
CONVERT BETWEEN MAP AND COMPASS AZIMUTHS

CONDITIONS

Given a gridded map and an aviation map, each with magnetic variation information.

OBJECTIVES

Perform each of the following within one minute each: convert a magnetic azimuth to a grid azimuth, convert a grid azimuth to a magnetic azimuth, convert a magnetic azimuth to a true azimuth, and convert a true azimuth to a magnetic azimuth.

TRAINING AND EVALUATION

Training Outline

1. In order work with a map and compass, you must understand the concept of *Magnetic Variation (sometimes called declination)*:

a. There are 360 degrees in a circle, with 0° (which is also 360°) pointing north, 90° pointing east, 180° pointing south, and 270° pointing west.

b. There are actually three different “norths”: true, grid, and magnetic. You must be able to work with all three.

1) True North is the direction along the earth’s toward the north pole. Lines of longitude are “true north” lines, since they converge at the north pole. Aviation charts are “True North” maps.

2) Grid North is used by maps that are not gridded in longitude (such a military UTM maps). Grid lines are straight and do not converge at the north pole, so grid north can be different from true north, especially as you get near either pole.

3) Magnetic North is direction along the earth’s surface toward the north MAGNETIC pole. This is NOT the same as the north pole -- the north magnetic pole drifts slowly each year, and is never exactly at the north pole. In Maryland, for example, magnetic north is 10° - 11° off of True North. This is important, because your compass will point to magnetic north, but your map will either be drawn to true north or Grid North.

2. Converting from map to compass headings:

a. To convert between Magnetic North and True North on a True North Map:

1) Find the Magnetic Variation (sometimes called declination on non-aviation maps).

a) On an aviation chart, there will be magenta lines running generally from north to south on the chart with degree markings on them (for example “10° W”). Choose the line halfway between the two points you have marked on the chart.

b) On other maps, look to the legend. It should note the magnetic variation, or declination, of the map.

2) Note the number of degrees and whether it labeled East or West

3) To convert True (map) azimuths to Magnetic (compass) azimuths, remember the saying “EAST IS LEAST, WEST IS BEST”.

a) If the Magnetic Variation is East, *subtract* the Magnetic Variation from the True azimuth.

b) If the Magnetic Variation is West, *add* the Magnetic Variation from the True azimuth.

4) To convert Magnetic (compass) azimuths to True (map) azimuths, do the opposite of above.

a) If the Magnetic Variation is East, *add* the Magnetic Variation from the True azimuth.

b) If the Magnetic Variation is West, *subtract* the Magnetic Variation from the True azimuth.

b. To convert between Magnetic North and Grid North on a Grid North Map:

1) Find the Magnetic Variation (sometimes called declination on non-aviation maps or the G-M Angle (Grid-Magnetic) on military maps. This should be in the legend, or in a small box near the legend.

2) Note the number of degrees and whether it labeled East or West

3) To convert Grid (map) azimuths to Magnetic (compass) azimuths:

a) If the Magnetic Variation is East, *subtract* the Magnetic Variation from the True azimuth.

b) If the Magnetic Variation is West, *add* the Magnetic Variation from the True azimuth.

4) To convert Magnetic (compass) azimuths to True (map) azimuths, do the opposite of above.

a) If the Magnetic Variation is East, *add* the Magnetic Variation from the True azimuth.

b) If the Magnetic Variation is West, *subtract* the Magnetic Variation from the True azimuth.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: Provide the student with a gridded topographical map and an aviation map. Ensure each map contains magnetic variation information. Mark a spot on each map. Provide the student with paper and a pencil or pen.

Brief Student: Tell the student that he will have one minute for each of four conversions, and may use paper and pencil for the math. Show the student the marked spot on each map. Tell him that the first two conversions are on the gridded topographical map. Then give the student a magnetic azimuth and ask him to tell you the grid azimuth. Then give him a grid azimuth and ask him to tell you the magnetic azimuth. Now tell him to use the aviation chart. Give him a magnetic azimuth and ask him to tell you the true azimuth. Finally, give him a true azimuth and ask him to tell you the magnetic azimuth.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Correctly converts a magnetic to a grid azimuth within 1 minute. | P | F |
| 2. Correctly converts a grid to a magnetic azimuth within 1 minute. | P | F |
| 3. Correctly converts a magnetic to a true azimuth within 1 minute. | P | F |
| 4. Correctly converts a true to a magnetic azimuth within 1 minute. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0214
PLOT AN AZIMUTH ON A MAP

CONDITIONS

Given a map, pencil, a straight edge, a known point and a grid azimuth.

OBJECTIVE

Within 2 minutes, plot the azimuth from the given point on a map.

TRAINING AND EVALUATION

Training Outline

1. In some situations, a team might be given an azimuth to plot. A good example would be if another ground team has determined a bearing to a distress beacon from their location. Plotting this azimuth on your map could help with the search.
2. To plot an azimuth.
 - a. Plot the point on the map.
 - b. Ensure that the azimuth is a grid, not a magnetic azimuth. If it is magnetic, convert to a grid azimuth.
 - c. Place the protractor on the point with the “0” degree mark oriented to grid north. Place a pencil mark at the degree mark on protractor corresponding to the azimuth.
 - d. With a straightedge, draw a line from the first point (the position) through the mark you just made.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: On a map, mark a point. Give the student the map, a pencil, a straightedge, and a protractor.

Brief Team Leader: Verbally give the team leader a grid azimuth. Tell the team leader to plot the azimuth from the point marked on the map within 2 minutes.

Evaluation

Performance measures

Results

- | | | |
|---|---|---|
| 1. Draws a line from the point along the correct azimuth +/- 2 degrees within 2 minutes | P | F |
|---|---|---|

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0215
DETERMINE AZIMUTHS ON A MAP USING TWO POINTS

CONDITIONS

Given a protractor, pencil, straightedge, and a map. You are away from mission base, and must move to another location. You have plotted your position on the map, and the position you are to move to. Now you want to determine the direction to move. Or, you have shot a magnetic bearing to a landmark, and wish to plot this bearing on a map from your position in order to verify the landmark.

OBJECTIVES

Within 2 minutes, the team leader determines the azimuth from one point to another on the map and converts it to the magnetic azimuth. Within 2 minutes, the team member must convert a magnetic azimuth to a grid azimuth and plot it from a known point on a map.

TRAINING AND EVALUATION

Training Outline

1. This task is essential for using a compass and map together. In order to navigate, you must be able to convert a compass heading to a line on a map, and convert a line on a map to a compass heading. Before you train on this task, ensure you can perform task O-0213, Convert Between Map And Compass Azimuths.
2. To determine a magnetic azimuth between two points on a map
 - a. The objective (protractor) method:
 - 1) Plot both points on a map.
 - 2) Draw a line between the two points (and beyond the second point if necessary to ensure the line is longer than the radius of the protractor).
 - 3) Position a protractor with the center point over the first point (your location), and ensure that the “0°” mark on the protractor points is aligned with north on the map (called grid north)
 - 4) Read the number off the protractor that is on the line. This is the map (either True or Grid, depending on the map) azimuth.
 - 5) Convert the azimuth to a magnetic azimuth (see separate task O-0213).
 - b. Alternate method for measuring azimuths without a protractor. First draw the line between the points as described above, and then:
 - 1) With an orienteering (Silva) compass:
 - (a) Place the compass on the map with one of the baseplate side edges on the line you drew.

(b) While keeping the baseplate still, rotate the compass dial until the “N” on the dial points to grid (or true) north on the map.

(c) Read the number on the compass dial that is in line with “Read Bearing Here” arrow on the baseplate. This is your grid (or true) azimuth).

2. With a lensatic compass (this is less accurate than using a protractor or orienteering compass):

(a) Orient the map to magnetic north (see separate task O-0217)

(b) Place the compass on the map so that the straightedge on the left side of the compass on the line you drew (if your compass does not have a straightedge, use the sighting wire. This is less accurate).

(c) Read the number on the compass dial under the fixed black index line on the glass. This is your magnetic azimuth. If you need a true or grid azimuth, convert as needed (see separate task O-0213).

4. To plot an azimuth on a map.

a. Using a protractor:

1) Ensure you are working with a grid azimuth. If not, convert it (see separate task O-0213).

2) Mark the location you wish to plot the azimuth from on the map.

3) Place the center hole of the protractor on that point, with the 0 degree mark aligned with grid north on the map.

4) Place a mark by the point on the protractor corresponding with the grid azimuth.

5) With a straightedge, connect the two marks.

b. Using an orienteering compass.

1) Ensure you are working with a grid azimuth. If not, convert it (see separate task O-0213).

2) Rotate the compass dial until the azimuth you want to plot is in line with the “Read Bearing Here” line on the base plate.

3) Mark the location you wish to plot the azimuth from on the map.

4) Without rotating the compass dial. Place the center of the compass dial over that point, with the 0 degree (North) mark on the compass dial, oriented with true north.

5) Place a mark on the map at the end of the “Read Bearing Here” line.

6) With a straightedge, connect the two marks.

c. Using a lensatic compass (less accurate):

1. Orient the map to magnetic north (see separate task O-0216)
2. Ensure you are working with a magnetic azimuth. If not, convert it
- 3) Mark the location you wish to plot the azimuth from on the map.
- 4). Place one end of the straight edge on the side of the compass on the mark you made on the map.
- 5) Keeping the straight edge of the compass on the mark, rotate the compass until the index mark lines up with the magnetic azimuth you wish to plot.
- 6) Draw a line along the compass straight edge. (If your compass does not have a straightedge, you can use the sighting wire, but this is not very accurate).

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: Provide the individual with a protractor, a pencil, a straightedge, and a map with a two points marked on it. Show him which is the start point, and which is the point he wants to go to.

Brief Team Leader: Tell the ground team leader to tell you the magnetic azimuth from the start point to the finish point. Then give him a magnetic azimuth, and instruct him to plot that from the same start point on the map.

Evaluation

Performance Measures

Results

NOTE: IF THE MAP IS A TRUE NORTH MAP, THE MEMBER SHOULD CONVERT TO AND FROM TRUE NORTH, OTHERWISE, THE MEMBER SHOULD CONVERT TO AND FROM GRID NORTH.

The individual determines a Magnetic Azimuth:

- | | | |
|--|---|---|
| 1. Determines the correct true (or grid) azimuth from the start to the finish point +/- 2 degrees. | P | F |
| 2. Correctly converts it to a magnetic azimuth | P | F |
| 3. Performs steps 1 and 2 within 2 minutes | P | F |

The individual Plots a Magnetic Azimuth:

- | | | |
|--|---|---|
| 4. Correctly converts it to a grid (or true) azimuth | P | F |
| 5. Plots it from the start point +/- 2 degrees | P | F |
| 6. Performs steps 4 and 5 within 2 minutes | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0216

ORIENT A MAP TO THE GROUND USING TERRAIN ASSOCIATION

CONDITIONS

Given a objective topographical map in the daylight

OBJECTIVES

Orient the map to North to within 30 degrees within 4 minutes.

TRAINING AND EVALUATION

Training Outline

1. In order to use your map for navigation, you must “orient” the map to the ground. A map is considered oriented when it is in a horizontal position with it's north and south corresponding to north and south on the ground. This allows you to easily see the terrain on the map as it corresponds to the terrain around you. Orienting the map can be quickly done without a compass if there are prominent terrain features nearby.

2. To orient the map:

a. Look at the map and the ground to find two or more terrain features common to both. Examples are hills, saddles, valleys, ridges or cultural features such as buildings or radio towers.

b. Rotates the map until the terrain features are aligned with the map. (For example, if there is a tower to your right and the mountain in front of you, rotate the map until the tower on the map is on the right and the mountain on the map is towards the top). By aligning the terrain features on the map with the same terrain features on the ground, the map is oriented.

c. Whenever possible, use three features, to ensure you do not accidentally orient the map 180 degrees out.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: Choose an outdoor location with good visibility and readily identifiable terrain features. Provide a map of the area that lists those terrain features to the student.

Brief Student: Tell the student orient the map to the ground. Tell him to describe out loud all the steps he takes.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Identifies three prominent terrain features | P | F |
| 2. Orients the map to north to within 30 degrees | P | F |
| 3. Completes all steps within 4 minutes | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0217
ORIENT A MAP TO NORTH USING A COMPASS

CONDITIONS

Given a objective topographical map and a compass in the daylight

OBJECTIVES

Orient the map to North to within 10 degrees in less than 4 minutes.

TRAINING AND EVALUATION

Training Outline

1. You want to use your map for navigation. First, you must “orient” the map to the ground. A map is considered oriented when it is in a horizontal position with its north and south corresponding to north and south on the ground. This allows you to easily see the terrain on the map as it corresponds to the terrain around you. Orienting the map with a compass is more accurate than using terrain association, and can be done when there are no visible prominent terrain features.

2. To orient the map using a compass:

a. Hold the map horizontally or place on a flat surface (DO NOT USE THE HOOD OF A VEHICLE OR ANY OTHER METAL SURFACE -- IT MIGHT ATTRACT THE COMPASS NEEDLE)

b. Look at the map and define the north/south grid lines and magnetic variation (see task O-0213 - Convert Between Map And Compass Azimuths). Determine where magnetic north is on the map

c. Hold the compass in front of you such that the north seeking arrow is free to rotate. Rotate your body until the arrow is pointing directly in front of your body.

d. Rotate the map until magnetic north on the map is pointing the same direction as the compass arrow.

e. Verify the map’s orientation by checking the location of prominent terrain features.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: Provide a map of the area and a compass to the student.

Brief Student: Tell the student to orient the map to magnetic north using the compass. Tell him to describe out loud all the steps he takes.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| The individual: | | |
| 1. Identifies the magnetic north on the map | P | F |
| 2. Locates magnetic north per the compass | P | F |
| 3. Orients the map to magnetic north within 10° | P | F |
| 4. Checks map orientation with terrain association | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0218

LOCATE OWN POSITION ON A MAP USING TERRAIN ASSOCIATION

CONDITIONS

In the field during daylight, while at an unknown location on the ground, given a objective topographic map, protractor, and a known point on the ground.

OBJECTIVE

Point out your position within a 100 meter tolerance within 5 minutes.

TRAINING AND EVALUATION

Training Outline

1. Determine the four cardinal directions.
2. Determine the type of terrain feature on which you are located. (see task O-0209, Identify the Major Terrain Features on the Map.)
3. Determine what type of terrain features surround your position.
4. Orient the Map. (see task O-0216 - Orient a Map to the Ground Using Terrain Association).
5. Relate the terrain features on the ground to the ones shown on the map.
6. Point out your position on the map.

Additional Information

More detailed information on this topic is available in Chapter 5 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: Select a relatively open area that has prominent terrain features shown on the map. Provide a map, pencil, paper, protractor and compass to the student.

Brief Student: Tell the student to locate his position on the map.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Determines 4 cardinal directions | P | F |
| 2. Identifies the terrain feature on which he is located | P | F |
| 3. Identifies terrain features around location | P | F |
| 4. Orients map to ground | P | F |
| 5. Relates the terrain features on the ground to those of the map. | P | F |
| 6. Identifies own location on Map (+/- 100 meters) | P | F |
| 7. Performs all steps within 5 minutes | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0220

MOVE FROM POINT TO POINT IN A VEHICLE USING A MAP

CONDITIONS

Given a vehicle with driver, state road map, topographical map, and compass.

OBJECTIVES

Successfully navigate to three designated points and return to the start point within 1 hour.

TRAINING AND EVALUATION

Training Outline

1. Virtually every sortie begins with driving to some point. Additionally, entire hasty searches must be done mounted (in a vehicle). Because of this, team leaders must become proficient at mounted navigation.
2. To find a point by mounted navigation
 - a. On the map, determine the route you will take (see task O-0209 - Identify Topographical Symbols on a Map)
 - b. Choose checkpoints along the way. These should be easily recognizable features along your route, such as bridges or road intersections. Every point where you will turn should be a checkpoint.
 - c. Measure the distance between each checkpoint (see task O-0211 - Measure Distance on a Map) and write it down.
 - d. Move to the point:
 - 1) Don't try to navigate and drive. Let someone else drive so you can concentrate on the map.
 - 2) Use the odometer to measure the distance between points. That way you'll know when checkpoints are coming up, or if you passed them by accident.
 - 3) Rely on terrain association whenever possible (see task O-0217 - Locate Own Position by Terrain Association). The metal in your vehicle will make compasses unreliable.
 - 4) If you must use a compass. Get out of the vehicle and move at least 10 yards away from it. This keeps the metal in the vehicle from affecting the compass (See task O-0201 - Use a Compass).
 - 5) Don't speed, stop abruptly, block traffic or break any traffic laws. Make sure to park clear of the road when stopping, and be careful when exiting the vehicle when traffic is driving by.

Additional Information

More detailed information on this topic is available in Chapters 3, 5 and 7 of the Ground Team Member and Leader Reference Text.

Evaluation Preparation

Setup: Pick at least three points, approximately 5 to 10 miles apart. At each point, place a marker, clearly visible from the road, with a number on it. Choose points that are located on the topographical map, but are not marked on the objective state road map. Provide the team leader with a vehicle and driver, a compass, a state road map marked with all three points (their approximate locations) and a topographical map marked with all three exact locations.

Brief Team Leader: Tell the team leader what the signs at each point look like. Tell the team leader to travel to each point, record the number on the sign, and then return to you within 1 hour. (You may allow more time if the route chose requires driving at slow speeds).

NOTE: If you are testing a group of people, pick more than three points, and have each person go to different combinations of points.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Successfully finds all three points, and reports the numbers | P | F |
| 2. Returns within 1 hour | P | F |
| 3. Does not perform any unsafe action (such as speeding), or direct the driver to perform any un-safe action. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0301
DETERMINE DISTRESS BEACON BEARING

CONDITIONS

You are a member of a ground team searching for an distress beacon that is at least 1/2 a mile away. You have been given the task of operating the detection finding (DF) equipment.

OJECTIVES

Indicate the direction to the distress beacon +/- 10 degrees within 10 minutes.

TRAINING AND EVALUATION

Training Outline

1. The majority of CAP search missions are electronic searches for distress beacons. Correct use of DF equipment is critical to these searches. The first step to locating distress beacon is to determine the general direction to the location of the distress beacon. (NOTE: This section was written using the popular L-tronics LH-16 l-per as the DF unit. Technical procedures should be adapted by units with other equipment).

2. To determine the bearing to a distress beacon:

a. Assemble the LH-16 on the antenna mast assembly and hold vertically in front of you, such that you can see the receiver controls.

b. Turn the unit on, turn the volume and sensitivity full up, set the MODE knob to DF. Set the FREQUENCY KNOB to the appropriate frequency (121.775 for practice distress beacons, 121.5 and 243 (military distress beacons or harmonic transmitted by basic distress beacons) for actual distress beacons, many military aircraft carry civilian distress beacons; civilian distress beacons by law transmit on both frequencies.). Listen for the distress beacon signal. If you have no signal, move to some other location where you do.

c. Once you have the signal, swing the antenna slowly through a full circle around you and determine where the needle centers. If it centers more than twice, analyze your location to determine if you might be dealing with more than one signal, reflections or interference from power lines, etc. Remember all directions where the needle centers.

d. Switch to the REC mode and determine where the signal strength is greatest (needle deflected farthest to the right, signal direction is off the left antenna mast). The strongest signal direction should be in one of the same directions that the needle centered in the DF mode.

e. Switch back to the DF mode and locate where the needle centers in the direction where the REC mode receives a maximum signal. While one person keeps the unit aligned on the signal, another stands behind him and takes a compass bearing (see task O-0201 - Use a Compass.)

f. As you get closer to the signal, decrease the sensitivity to avoid overloading the receiver.

Additional Information

More detailed information on this topic is available in Chapter 6 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Set up a practice beacon transmitting on 121.775 MHz at least one half mile away from the test site. Take a set of DF equipment, and ensure that one can get a good strong signal to the practice beacon (verify the direction off a map). With a compass, determine the magnetic bearing to the practice beacon. Disassemble the DF equipment and give it to the student.

Brief Student: Tell the student to assemble the DF gear, determine the direction to the practice beacon, and point it out to you. When he points, check the bearing with a compass.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Correctly put the DF equipment into operation. | P | F |
| 2. Uses DF and REC (as applicable) to determine the direction to the practice beacon. | P | F |
| 3. Points out the direction to the practice beacon +/- 10 degrees. | P | F |
| 4. Completes all steps within 10 minutes | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0302
LOCATE A DISTRESS BEACON

CONDITIONS

You are a member of a ground team searching for a distress beacon (ELT/EPIRB). You have been given the task of operating the detection finding (DF) equipment. You have used the direction finding (DF) technique to close in on the signal, and now you know the distress beacon is nearby.

OJECTIVES

Within 30 minutes, use signal strength techniques to locate a practice beacon located within 200 meters of your location. (This is for a wooded area. More time should be allotted for an urban or airport environment).

TRAINING AND EVALUATION

Training Outline

1. Once the team has moved close to the distress beacon using the DF technique, that technique may become less effective. You know you are close when the signal is loud even with the sensitivity turned down. At this point signal strength techniques may be used easily. There are two techniques - normal signal strength and body blocking. These techniques can be used with DF equipment, or any portable radio or scanner that can pick up the distress beacon frequency (121.775 for practice, 121.5 and 243 for civilian and military distress beacons respectively).

2. To locate the distress beacon:

a. Assemble the DF gear or radio and tune to the appropriate frequency. Use a short antenna (such as a “rubber duck” flexible antenna). Ensure you can hear the signal of the distress beacon. Adjust the sensitivity and volume so that you can barely hear the signal.

b. Body Blocking. To determine a bearing to the distress beacon, place the receiver at waist level and rotate in a circle until weakest signal is heard. At this point the target distress beacon should be directly behind you, since your body is blocking the signal from the distress beacon.

c. Signal Strength. If you are sure the distress beacon is located nearby (for example, if you are at an airfield and you are sure it is in one of the planes) simple walk through the area.. As the signal strength increases rapidly, you are getting closer to the distress beacon. Decrease the sensitivity (or increase squelch), reduce the antenna height or slightly offset the receiver frequency as you get closer to permit body-blocking.

Additional Information

More detailed information on this topic is available in Chapter 6 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Hide a practice beacon transmitting on the practice frequency approximately 200 meters from the test site. Take a set of DF equipment, and ensure that one can get a good strong signal to the practice beacon. Disassemble the DF equipment and give it to the student. The evaluator should be prepared to document the time it takes each student to locate the practice beacon. If multiple students have difficulty locating the practice beacon within the time allotted, the evaluator may need to re-evaluate students or the time allotted based on location.

Brief Student: Tell the student to locate the practice beacon within 30 minutes (add more time if the practice beacon is in an urban or airport environment).

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| Within 30 minutes the individual: | | |
| 1. Correctly puts the DF equipment into operation. | P | F |
| 2. Locates the distress beacon/practice beacon within 30 minutes (more may be needed for urban/airport searches) | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0403

EMPLOY SCANNING TECHNIQUES WHILE ON FOOT

CONDITIONS

You are part of a ground team on a search mission in the field.

OJECTIVES

Employ appropriate scanning techniques and identify clues while moving across the terrain.

TRAINING AND EVALUATION

Training Outline

1. Searching systematically is the mission of the ground search and rescue team. Individual team members accomplish this by scanning their assigned search sector systematically to ensure that the entire area is covered. Night scanning is similar to day scanning, but relies more on peripheral vision, which is more effective than direct vision in limited visibility conditions.

2. The following rules apply to individuals moving as part of a search line or team:

- a. Scan the entire area in front of you from left to right and then from right to left.
- b. Observe areas blocked by foliage or terrain that should be investigated closely.
- c. Look down at the ground close at hand and up in the tree branches for clues.
- d. As you move through the woods investigate the areas that were blocked by foliage on your initial scan.
- e. Remember that clue-consciousness is critical. Look for the clues that will lead you to the target, not just the target itself.
- f. Occasionally stop for a moment and listen for clues.
- g. Turn around and observe the area behind you for clues that could have been missed as you passed through.
- h. Individual searchers do not need to maintain an absolutely straight line when moving through the woods. Move around as required to investigate and search the entire area. Ensure that you know and do maintain the teams base direction of movement.

3. At night, the following additional rules apply:

- a. Do not stare at any one spot too long.
- b. Do not use white light (unless conducting a full light search). White light will destroy your night vision.

c. Avoid white light for 30 minutes prior to the search to give your eyes time to adjust. If you are moving to the search site by car, turn off the overhead dome light.

d. Be especially alert for movement or noise.

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Choose a wooded area to search. Place five identifiable clues in the area to be searched

Brief Student: Inform the student that he is part of a search line. Indicate the direction of search. Tell him to move through the woods and scan for clues. Then ask him to describe the additional rules for night search.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Scans the search area in front of him systematically (right, left, up & down) | P | F |
| 2. Observes behind him for clues | P | F |
| 3. Recognizes and investigates blocked areas | P | F |
| 4. Identifies 3 out of 5 clues placed by the evaluator | P | F |
| 5. Maintains the teams base direction | P | F |
| 6. Identifies 3 of the additional rules for night search | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0404
MOVE AS PART OF A SEARCH LINE

CONDITIONS

You are a member of a ground team moving through the woods on a line search.

OBJECTIVES

Maintain the specified interval, direction, and speed, expanding and contracting on the base man as needed, while remaining alert for both the search target and commands from the team leader.

TRAINING AND EVALUATION

Training Outline

1. When moving in a line search it is extremely important to maintain the proper interval, direction and speed. As a team member, you must maintain this direction and your interval while moving through varying terrain in order to ensure an efficient search.

a. The interval between members is specified by the team leader to insure a certain level of coverage. Team interval is defined as the number of team members to your left and right you must keep in sight. For a very spread out search, the team leader will specify that you only need to see one person on your left and right. For a very concentrated search, you might be told to keep two or three people on each side within your sight.

b. The search line also has a direction of movement. This is determined by guiding on something such as a compass azimuth, a terrain feature like a road, or a marked line left by the team's last sweep through the area. One team member will normally be designated as the *base* team member. He or she is responsible for maintaining direction. This will normally be the person at one end of the search line, following a terrain feature or marked route. It could be someone in the middle, though, if the team is following an azimuth or a terrain feature in the middle of the search line. In very spread out searches (with an interval of one person on either side in sight), it is probable that all members of the team might be given the compass azimuth to follow.

c. Search lines move as fast as the slowest searcher. Some parts of the search area might be harder to search or more difficult to travel through. The team should always slow down for the slowest searcher, not make that person speed up and possibly miss a clue.

d. Search lines do not have to be silent. Feel free to talk to the team members on your left and right in order to maintain proper interval, direction and speed. Don't confuse this for idle chit-chat being acceptable. Remember to stay focused on your job.

2. To move as part of a search line:

a. Know the appropriate interval, direction and location of the base team member (to your left or right).

b. As you move, space yourself so you can barely see the number of team members on either side specified by the interval.

c. If the terrain changes and you cannot see the required number of team members, move towards the base. If you cannot see the persons farther away from the base than you, then advise them to move in as well.

- d. Maintain proper direction either with your own compass (if specified) or by observing the team members closer to the base member than you.
- e. You do not have to keep an absolutely straight line as you walk. You can move about in order to effectively search all the terrain, as long as you maintain the appropriate general direction.
- f. Try to stay on-line with other members. If they stop, you stop.
- g. Do not rush to catch up. If it is taking longer to search the area you are in, have the other team members slow down.
- h. Any team member may halt the line for safety or possible clue/find, but only the leader can forward the line.

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Place the individual on a search line of at least five people. Choose an area of restricted visibility terrain, such as woods, to move through.

Brief Student: Inform the team that you will act as the team leader. Provide the team with a direction, designate a base student, and specify an interval of 2 individuals. Forward the team and observe. At some point during the movement, change the interval to 3 individuals.

Evaluation

| <u>Performance measures</u> | | <u>Results</u> | |
|---|---|----------------|--|
| 1. Maintains correct interval | P | F | |
| 2. Maintains correct direction | P | F | |
| 3. Maintains proper speed. | P | F | |
| 4. Communicates with other members to maintain interval, direction and speed. | P | F | |
| 5. Adequately searches assigned area. | P | F | |
| 6. Remains alert to team leader commands. | P | F | |
| 7. Correctly adjusts interval as directed. | P | F | |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0405

COMMUNICATE TO OTHER MEMBERS OF THE SEARCH LINE

CONDITIONS

You are a part of a team conducting a line search, and the team leader issues a verbal command to the team or a team member calls for the team leader.

OJECTIVES

Quickly relay all verbal commands and reports to team members farther from the speaker.

TRAINING AND EVALUATION

Training Outline

1. The primary means of communication within a search line is verbal. Since a team is spread out to cover a large search area, not everyone can hear everyone else. To solve this problem, team members relay leader commands and member reports to other members of the team who are further away from the speaker or whistle signals are utilized in accordance with task O-0406.

2. To relay a command or a report.

a. Immediately obey the command. (If you hear "HALT THE LINE," then halt immediately before relaying the command.)

b. Determine from which direction the command came.

c. Repeat the message exactly, shouting it in the direction of team members farther from the speaker than yourself. If you are sure that there is no one farther from the speaker than you, you need not repeat the message.

d. Example: You hear "FORWARD THE LINE" from someone on your left. Start moving. Then turn to the team members on your right, and shout "FORWARD THE LINE."

3. To send a verbal message:

a. Shout your message toward where you believe the team leader is.

b. Listen to ensure that the team members on either side of you have relayed your message appropriately. If no response is heard, repeat your message until the team members at your side do respond.

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Position the student in a field facing a specific direction. Stand to his left or right and act as the team leader

Brief Student: Brief the student that he is on a search line at position number seven, that you are the team leader, and that there are other team members to his right and left. Issue the command “Forward the Line” and have the student respond. Then have the student halt the entire search line by verbal command.

Evaluation

Performance measures

Results

1. The student begins moving and shouts “FORWARD THE LINE” in the opposite direction.

P F

2. The student shouts “HALT THE LINE” and listens for response.

P F

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0406
USE WHISTLE SIGNALS

CONDITIONS

You are part of a team in the field, and wish to communicate using a whistle.

OJECTIVES

Demonstrate the four whistle signals correctly.

TRAINING AND EVALUATION

Training Outline

1. Whistle signals are used to transmit commands along the search line or whenever team members are separated too far for voice communications.
2. Normally, team members do not repeat whistle signals that they here. This can cause confusion. However, if you believe the signal can't be heard by some members of the team, repeat the signal you hear.
3. The whistle signals are:
 - a. 1 short blast -- Forward the line (team moves forward)
 - b. 2 short blasts -- Stop the line (team stops). If you are moving and hear only one blast, stop anyway.
 - c. 3 short blasts -- Help or danger signal (Stop immediately)
 - d. 1 long blast -- Assemble on the signal origin (the person blowing the whistle)

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Ensure that the student has a whistle.

Brief Student: Tell the student to demonstrate, one at a time, the whistle signals listed below.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Demonstrates the halt whistle signal | P | F |
| 2. Demonstrates the assemble whistle signal | P | F |
| 3. Demonstrates the help whistle signal | P | F |
| 4. Demonstrates the forward whistle signal | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

CONDUCT ATTRACTION TECHNIQUES

CONDITIONS

You are part of a ground team on a search for a missing person or persons. You want to make it easy for the missing persons to find YOU.

OJECTIVES

Identify sound and light attraction techniques that a team can conduct.

TRAINING AND EVALUATION

Training Outline

1. If the target of a search is conscious, it is advantageous to let the target know you are in the area. That way, even if you don't spot him, he may signal you. This is done by conducting *attraction tasks* - basically being visible and easily heard. Stealth is not a good thing on a search line. However, you still need moments of silence when you listen for the target's response. By day, noise is the primary attraction. At night, noise and light are effective.

2. Sound Attraction Techniques (usable day or night).

- a. Shouting out the target's name (make sure it has been released by the Public Affairs Officer first.)
- b. Honking vehicle horns during route searches.
- c. Use of public address systems.
- d. The "Sound Sweep:

1) On command from the team leader, the team halts and all members blow their whistles for 15 seconds.

2) After blowing the whistle, the team remains stationary and silent for one minute listening for a response.

3. Light Attraction Techniques (usable at night):

- a. Building a bonfire (when stationary for long periods).
- b. Hanging light sticks in the trees (when stationary). Be sure to collect them when you leave.
- c. Shining Flashlights. Avoid blinding team members. IF you are searching without lights, use a red or blue lens for an attraction light (to avoid night blindness).
- d. Car headlights during vehicle searches.
- e. Hanging signs that direct the lost person towards your camp or base.

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Ask the student to identify three day and three night attraction techniques and describes their use.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Identifies three day attraction techniques and describes their use. | P | F |
| 2. Identifies three night attraction techniques and describes their use. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0408
IDENTIFY AIRCRAFT SEARCH CLUES

CONDITIONS

You are part of a ground team searching for a missing aircraft.

OJECTIVES

Identify search clues for which to look.

TRAINING AND EVALUATION

Training Outline

1. Searching for a missing aircraft is an exercise in locating clues that will lead to the location of the aircraft. These clues are found by conducting air and ground search, airfield searches (“ramp checks”), and witness interviews.

2. Ground team members on searches in wilderness areas should look for the following:

a. Changes in the Terrain:

- 1) Broken or disturbed trees and underbrush.
- 2) Landslides
- 3). Horsetails caused by windblown snow or sand
- 4). Breaks in terrain.
- 5). Blackened or discolored areas
- 6) Smoke
- 7) Presence of scavengers (vultures, wolves)

b. Smells:

- 1) Smoke
- 2) Decomposition odors.
- 3) Fuel, oil, or brake fluid

c. Signs of the Aircraft

- 1) Pieces of wreckage (twisted metal, seats, etc.)
- 2) Fuel, oil, or brake fluid.

d. Signs of the Pilot/Passengers

- 1) Bits of clothing or personal effects
- 2) Trail markings
- 3) Footprints
- 4) Campfires
- 5) Garbage
- 6) Signals (mirrors, etc.)

e. Unusual sounds (voices, creaking metal)

3. Downed aircraft do not usually come down intact and do not usually even look like aircraft on the ground. **YOU ARE NOT LOOKING FOR AN AIRPLANE - YOU ARE LOOKING FOR SIGNS OF AN AIRPLANE CRASH.** Recognition and detection of clues to the aircraft location is critical.

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Brief the student that he is on a missing aircraft search. Tell him to identify eight clues to aircraft crash locations.

Evaluation

Performance measures

Results

1. Identifies eight specific aircraft search clues from the above list

P F

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0409
IDENTIFY MISSING PERSON SEARCH CLUES

CONDITIONS

You are part of a ground team on a search for a missing person or persons.

OJECTIVES

Identify search clues for which to look.

TRAINING AND EVALUATION

Training Outline

1. Searching for a missing person is an exercise in locating clues that will lead you to the location of the individual or group. These clues are found by conducting ground searches, air search, and witness interviews.

2. Ground team members on searches in wilderness areas should look for the following:

a. Physical clues

- 1) Pieces of clothing or equipment.
- 2) Smoke, by sight or smell.
- 3) Food wrappers or trash, cigarette butts.
- 4) Broken or disturbed trees and underbrush.
- 5) Presence of scavengers (vultures, wolves, etc.).
- 6) Signs of human passage or occupation.
- 7) Decomposition odors.

b. Recorded Clues

- 1) Trail registers
- 2) Sign-in logs

c. People

- 1) Witnesses
- 2) Family and friends

d. Events

- 1) Signals
- 2) Falling rocks
- 3) Unusual noises

3. Missing people are considered to be clue generators. Rarely can any person travel through or be in the woods without leaving signs of their passage. Clue-consciousness on the team member's part is critical. Do not look for the missing person, look for the clues that lead you to him.

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Brief the student that he is on a missing person search. Tell him to identify eight missing person search clues.

Evaluation

Performance measures

Results

- 1. Identifies eight missing person search clues

P F

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0410
MARK A ROUTE

CONDITIONS

Given a roll of surveyor's tape or other marking paper or tape and daylight. You are the end person on a search line, or the designated marker while moving in column. Your team leader has told you to mark your route through the woods.

OJECTIVES

Mark a route of travel so that you can you can back track on it.

TRAINING AND EVALUATION

Training Outline

- 1.. Route marking is very important when searching. If a team marks the edges of the area it searches, it can ensure it does not miss or "double cover" any terrain. Marking can also be important in other situations, such as marking the route to an isolated crash site in order to assist emergency workers in getting to the site.
2. Normally a team marks both the left and right side of the area it searches unless:
 - a. One side of the search area is a clearly definable linear terrain feature, such as a road, stream, or edge of a forest.
 - b. One side is already marked from the teams previous pass through the area.
3. To mark a route:
 - a. Determine what color of marking tape to use. It is best to use a different color for each end of the line. Also, to avoid confusion, ensure the area does not already contain old markings in the same color.
 - b. As you walk, tie a band of surveyor's tape at eye level around a tree, fence post or other feature. If moving through a field, use the highest plant you can find.
 - c. Ensure the tape is visible from all directions.
 - d. Place tape at intervals where you can always see the next band from the previous one, in either direction. Tie bands more frequently as the terrain restricts visibility.
 - e. Slow the search line down as necessary in order to have time to leave good marks. Do not get in a hurry and do a poor marking job.

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Choose a wooded area at least 400 meters long. Give a roll of marking tape to the student.

Brief Student: Have the student follow you (or walk on the end of a search line) for at least 400 meters while marking the route.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Leaves markings at eye level, visible in all directions | P | F |
| 2. Ensures markings are close enough to see the next mark from the last one in both directions. | P | F |
| 3. Lets the team leader know if the team is moving too fast for good marking. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0411
CONDUCT INDIVIDUAL ACTIONS ON LOCATING A CLUE

CONDITIONS

You are moving as part of a search team when you discover a clue.

OBJECTIVES

Demonstrate the appropriate actions on finding a clue

TRAINING AND EVALUATION

Training Outline

1. If an individual team member spots a clue relating to the search objective (missing aircraft or person), the primary concern is to relay this information to mission base. Mission base can then re-prioritize search resources based on the new information. Clues are found during ground searches, ramp checks, distress beacon searches, and witness interviews.
2. The actions that an individual team member would take are the same no matter what the source of the clue.
 - a. Halt in place. On a ground search, immediately call "Halt the line" and ensure that the search team stops in place.
 - b. Alert the team leader of a possible clue find and your position on the line.
 - c. From your position visually survey the surrounding area for safety hazards such as falling tree limbs, wreckage, etc.
 - d. Do not disturb anything in the area or disturb the clue in anyway. If it is clothing, do not pick it up as your scent on it will interfere with search dog resources.
 - e. Brief the team leader on what you see and any safety hazards when he arrives at your position.
 - f. In the woods, secure the area around the clue with marking tape to keep others away from it.

Additional Information

More detailed information on this topic is available in Chapters 7 and 15 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None.

Brief Student: Brief the student that he is on a missing aircraft search and he has just spotted a possible clue (piece of metal) approximately 20 meters in front of him. He is position #4 on the search line. Tell him to demonstrate the actions he would take.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| 1. Halts in place | P | F |
| 2. Halts the team immediately | P | F |
| 3. Calls for team leader with position number | P | F |
| 4. Performs safety survey and identifies hazards. | P | F |
| 5. Does not disturb the clue | P | F |
| 6. Briefs the team leader upon arrival | P | F |
| 7. Secures area with marking tape | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0412
CONDUCT INDIVIDUAL ACTIONS ON FIND

CONDITIONS

You are moving as part of a search team when you discover the search target.

OJECTIVES

Demonstrate the appropriate actions on finding the search target.

TRAINING AND EVALUATION

Training Outline

1. At the point when an individual team member first sights the object of a SAR mission, the search phase ends and the rescue and recovery phase begins. In this process, the safety of the search objective, the individual team member, and the team as a whole is a primary concern.
2. The actions an individual takes are the same for a missing aircraft or a missing person search.
 - a. Halt in place. Immediately call "Halt the line" or use the appropriate whistle signal to halt the team and ensure that the search team stops in place.
 - b. Alert the team leader of a possible find and your position on the line.
 - c. From your position visually survey the surrounding area for safety hazards such as falling tree limbs, wreckage, etc.
 - d. Brief the team leader on what you see and any safety hazards when he arrives at your position.

Additional Information

More detailed information on this topic is available in Chapters 7 and 15 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None.

Brief Student: Brief the student that he is on a missing aircraft search and he has just spotted aircraft wreckage approximately 20 meters in front of him. He is position #4 on the search line. Tell him to demonstrate the actions he would take.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Halts in place | P | F |
| 2. Halts the team immediately | P | F |
| 3. Calls for team leader with position number | P | F |
| 4. Performs safety survey and identifies hazards | P | F |
| 5. Briefs team leader on arrival | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0413
PARTICIPATE IN A HASTY SEARCH

CONDITIONS

You are a member of a ground team assigned to perform a hasty search of a specific area.

OJECTIVES

Search an assigned area with minimal assistance and report back to the team leader with the results.

TRAINING AND EVALUATION

Training Outline

1. In the course of conducting a search ground team are often broken up into smaller teams of qualified personnel to search very specific areas. Typically this team is made up of two or three personnel with advanced training to be able to assist survivors if found before a full team arrives. The suggested make-up of this team is:

- a. A qualified Ground Team Leader. This person may be serving as the assistant team leader for the larger team, but has the necessary skills to lead the team if necessary.
- b. A Communicator. This person has the skills to communicate effectively with the larger team and mission base as necessary including finding better locations to transmit from.
- c. A Medic, First Responder or other higher qualified medical person. This person must have the basic skills to handle the initial medical problems encountered in victims before the larger team or local EMS arrives.

2. Many searches are resolved via hasty searches of "hot spots" assigned by the mission coordinator. Examples of these hot spots include:

- a. Trails, fire roads, or other access points to the area of high probability.
- b. Streams, rivers, drainages, lake edges and other runoff points.
- c. Routes towards known gathering places.
- d. Known visited places by the missing.
- e. Common aircraft accident locations.
- f. Other logical places the missing might go.

3. It is essential that this team maintain adequate communications. Though this team could probably deal with incidents effectively for the short term, members could easily be overwhelmed by tasks necessary to accomplishing the mission. Quick and effective requests for assistance should be accomplished as soon possible on finding the objective. Don't be a hero, lives are at stake.

Additional Information

More detailed information on this topic is available in Chapter 7 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Brief the student that he is to be assigned to a hasty search of a specific area. Ask him to describe who is normally a part of a hasty search, and the areas normally searched by a hasty team.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Student identifies the three key personnel/assignments of the normal team assigned to a hasty search. | P | F |
| 2. The Student is able to list at least five common places that a hasty search may be used. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0502
PARTICIPATE IN A LITTER OR STRETCHER CARRY

CONDITIONS

As part of team you are required to evacuate a patient from a wilderness environment using a litter or stretcher.

OJECTIVES

Participate as part of a litter team to properly evacuate a simulated patient from the wilderness over several obstacles.

TRAINING AND EVALUATION

Training Outline

1. At times the ground search and rescue team will be required to assist in the transportation of a patient from a remote location to medical assistance. This is usually done by placing the patient in a stretcher or litter and having a six to eight person team manually transport them to safety. As part of the team, the individual is responsible for knowing how to lift, carry, pass the litter, and set the patient down properly.

2. Litter lifting. Once the patient is in the litter and secured, the team must bring the litter to waist height to begin transport.

a. To do this four to six individuals line up on alongside the litter (two or three per side), the person at the right front (head position) is in charge of the lift. All individuals get down on one knee facing the litter. Grab the litter rail with both hands.

b. On the command "lift to the knees," straighten your back and lift with both hands, pulling the litter up to knee height.

c. On the command "lift to the waist," use your rear leg to lever yourself to a standing position, with both hands still on the litter.

3. Litter Carry.

a. After the litter is lifted, the team leader commands 'face front.' At this point take your front hand off the litter and rotate your body to face the front (head) of the litter.

b. On the command 'forward', start walking with your inside foot first. Ideally the people on each side of the litter are 'out of step with each other,' to avoid bouncing the litter, but moving the litter should not be stopped to simply stay in step.

c. If you tire and need relief, alert the team leader. A relief bearer will come up directly behind you and grab the litter. When he tells you that he has 'got the litter' you may let go and move off to the side. At this point you join the pool of relief bearers.

4. Pass over obstacles. Fences, rocks, or fallen logs represent obstacles to properly carrying the litter. To overcome these:

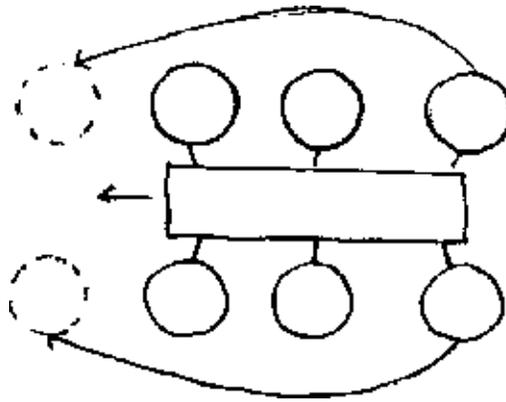
a. The team leader brings the litter directly up to the obstacle and halts the team.

b. Two relief bearers cross the obstacle and position themselves at the head. The litter is passed forward to so that the relief bearers take over the front of the litter.

c. The bearers at the rear of the litter who just passed their load forward, then cross the obstacle and position themselves in front of the relief bearers.

d. The litter is again passed forward until the only the rear of the litter is on the obstacle.

e. The process is repeated until the litter and all the bearers are passed the obstacle and normal travel can resume.



Litter Transfer Uphill or Over an Obstacle

5. This same technique should be used when moving up or down a steep slope (whenever possible, however, avoid such slopes). Ropes can be secured to the litter to allow personnel at the top of the slope to assist in the movement up or downhill.

6. Setting the litter down

a. To set the litter down, the team leader calls a halt and then 'face center.' At this point the bearers rotate their bodies to face into the litter and grab the litter rails with both hands.

b. The team leaders then command 'lower to the knees.' At this point keep your back straight and lower yourself to a kneeling position with the litter in front of you and at knee height.

c. On the command 'lower to the ground,' bend forward slightly until the litter is safely on the ground. At this point move away from the litter to allow the team medic to check out the patient.

6. Lift straps. If you have a length of 1" webbing in your gear, it may be easier on your arms to construct a sling to help carry the litter. Tie a water knot in the webbing to secure the ends together. Girth hitch or snaplink the webbing to the litter rail and place the long loop over your shoulder. Adjust the position of the water knot to set the loop to the proper length. On long evacuations, this will reduce fatigue.

Additional Information

More detailed information on this topic is available in Chapter 8 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Place the student on stretcher team. Provide the team with a litter and a simulated patient secured to the litter. (You can use an actual person in the litter, or something of similar weight.) Prepare a course of at least 300 meters containing at least 3 obstacles that will the team must pass the litter over.

Brief Student: Tell the team that you will call all commands for the team. Show them the course they must carry the stretcher over. Have the students line up on the stretcher, with the relief bearers off to the side. Tell all students that they should request relief at least once during the 300 meter course.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Lifts the litter on command to the knees while keeping his back straight. | P | F |
| 2. Lifts the litter to the waist properly | P | F |
| 3. Relieves another litter bearer properly | P | F |
| 4. Participates in transfer over an obstacle properly | P | F |
| 5. Lowers the litter to his knees and ground on command. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0601
CONDUCT ACTIONS WHEN LOST

CONDITIONS

You have become separated from your ground team in the wilderness, and do not know where they are or where you are.

OJECTIVES

Take correct actions needed to survive and be found.

TRAINING AND EVALUATION

Training Outline

1. Search and rescue operations are frequently conducted in adverse weather and terrain conditions. The same environment that caused the search objective to be missing could cause the same difficulties for a team member. All ground team members should have a knowledge of basic survival skills. This will decrease the chances of serious injuries and decrease the time before the team member can be found.

2. If you are in a survival situation, remember the acronyms **SURVIVAL** or **STOP**:

a. **SURVIVAL**:

1) **Size up the situation.** Look at where you are. What resources (water, wood, etc.) are available nearby? What dangers are there? (see task O-0101 - Identify Natural Hazards.) Inventory your equipment to establish what tools you have to handle the situation. Are there people nearby who might be able to help you? For example, if you just became separated from you team, just blowing your whistle might rescue you. (See task O-0406 - Use Whistle Signals)

2) **Undue Haste Makes Waste.** **STOP.** Walking around aimlessly is a waste of energy. Take your time and think about your decisions. You could easily make the situation worse by moving farther from help, injuring yourself, or losing an important item.

3) **Remember Where You Are.** You may not be as lost as you think, just momentarily disoriented. Think about the last time you knew where you were, and what happened next. Mark your current location, and memorize it. That way, as you look around, you will not become more lost.

4) **Vanquish Fear and Panic.** These feelings are natural, but might lead you to do something that you have not thought through clearly. If you are tired, frustrated, or near panic, stop and rest. Provide your body and mind with a few minutes or hours of down time. This will help to calm anxieties and better prepare you to handle the situation. Keep a positive mental attitude -- believe you are going to be all right.

5) **Improve Your Situation.** Think about how to be found, safe from danger, and more comfortable.

a) Find a clear area. This will facilitate your being spotted from the air.

b) Establish shelter for your body. If you have to spend the night in the wilderness, spend the necessary time to build adequate shelter and a fire. Maintaining body warmth and protection is a high priority.

c) Establish signals. Place orange markers or vests in nearby location. Preferably where they can be seen from the air. Do not forget Ground to Air Signals (task O-0703). Build a large signal fire. Establish a schedule for blowing your whistle to attract anybody in the area. If you are moving at night, stay in the open. Tie your chem-lite to the end of a string and swing it in a circle over your head. This will make you easy to spot from the air, and make it easy for the pilots to tell the difference between you and the lights of the ground searchers looking for you.

d) Find water. If you are in a wilderness area, remember that downhill always leads to water. Do not drink standing water, build a fire and boil it at least one minute to remove bacteria. Rain water, melting snow or ice will provide adequate bacteria-free water.

e) If you have to move, remember that downhill and downstream leads to civilization. Moving uphill will rarely lead you to any help.

6) **V**alue Living. Never stop trying. Giving up is the surest way to ensure failure. No matter how cold, wet, or tired you get, do not forget that positive mental attitude. Never give up!

7) **A**ct Like the Natives. Observe animals in the area. They live here -- they know where the where food and water are, and what the dangers are. (be careful what you eat, though. Some plants are poisonous to people but harmless to animals.)

8) **L**earn Basic Skills. And use them. This book is full of them. Make sure you know how to build a fire, avoid hazards, build a shelter, signal for help, and find water.

b. **STOP:**

1) **S**tay where you are. Rather than wandering aimlessly, don't move unless it is more hazardous to stay where you are than to move.

2) **T**hink before acting rashly. If something does not seem right, it probably isn't. If you take the time to stop and think, you may come up with a better solution.

3) **O**bserve your surrounding and its' inhabitants. Animals survive on natural instinct experience in their surroundings. By observing their habits, and in many cases mimicking them, you will survive.

4) **P**lan for the worst. Most people who do not survive had the tools and the knowledge to survive, but got caught off guard and didn't do anything about it. If you plan for the worst using what you have, you will at least be ready, and kept your mind off of being lost and re-focused your energy on living.

3. If you ever end up in a survival situation, remember that a Positive Mental Attitude will save you. If you don't want to live, then most of what you do will be a waste of time, but if you really do want to live then you have a chance. There are many stories of people that should have died days earlier being rescued and returning to happy and healthy lives long after the normal person dies. And there are obviously many other of people who died that shouldn't have. Stay focused, and tell yourself you want to live!

Additional Information

More detailed information on this topic is available in Chapter 9 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: None

Brief Student: Tell the individual that that he has become separated from his team and darkness is 2 hours away. Have him describe his immediate actions and survival steps.

Evaluation

Performance measures

Results

The individual:

- | | | |
|--|---|---|
| 1. Identifies and describes the SURVIVAL or STOP procedure steps. | P | F |
| 2. Defines Positive Mental Attitude and demonstrates understanding the importance of it. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

O-0702
USE A SIGNAL MIRROR

CONDITIONS

You are in the field, alone or with your team, in daylight, and need to attract the attention of an overflying aircraft

OJECTIVES

With a mirror, correctly signal in the direction of an overflying aircraft.

TRAINING AND EVALUATION

Training Outline

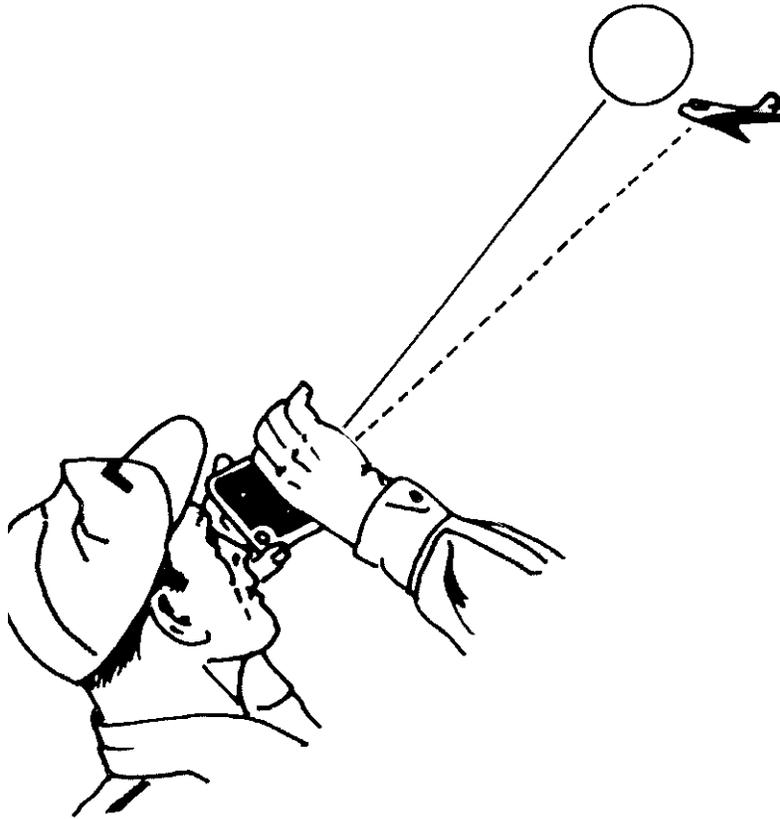
1. At times, you may have radio difficulties and need to attract the attention of an aircraft. Even if you have radio communication with the airplane, the pilot might be having difficulty in spotting you. In daylight, using a signal mirror is an excellent way to attract a pilot's attention, or let him know where you are. Mirror signals can be seen for over 70 miles under normal conditions. Over desert terrain or on the water they can be seen from over 100 miles. A signal mirror can be a high-tech glass mirror (military MK-3 signal mirror) or just a highly polished piece of metal. Mirror signals work well even on hazy or overcast days.

2. To use the MK-3 signal mirror:

- a. Outstretch one hand in the direction of the airplane, leaving the palm facing you.
- b. With the mirror, reflect sunlight into the palm your outstretched hand.
- c. Move your outstretched hand out of the way. Slowly bring the mirror up to eye-level and look through the sighting hole. You will see a bright spot of light. This is the aim indicator.
- d. Hold the mirror near your eye and slowly turn and manipulate it so that the bright spot is on the target aircraft. If having a tough time lining up on the airplane, the individual might try sighting the mirror between two fingers on the outstretched hand.

3. To use a polished metal surface:

- a. Outstretch one hand in the direction of the airplane, leaving the palm facing you.
- b. With the mirror, reflect sunlight into the palm your outstretched hand.
- c. Slowly bring the mirror to chest level while maintaining the reflected light on your hand
- d. Move your outstretched hand out of the way. Maneuver the mirror so that the light reflection is in the direction of the overhead aircraft. Move your hand in and out in front of the beam to create flashes or simply manipulate the mirror.



Using an MK-3 mirror

Additional Information

More detailed information on this topic is available in Chapter 10 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Place someone on a distant point (preferably higher ground than where the student is standing). This person will simulate the airplane. Ensure he has communications with you. Ensure the student has signal mirror, preferably the one from that student’s own field gear.

Brief Student: Tell the student to use the mirror to signal the person simulating the aircraft.

Evaluation

| <u>Performance measures</u> | <u>Results</u> |
|---|----------------|
| 1. The student produces a reflection on his hand | P F |
| 2. The student successfully directs the flashes toward the target within 15 seconds | P F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

EXERCISE UNIVERSAL PRECAUTIONS

CONDITIONS

In participating as a member of the CAP mission team, you encounter a patient that needs to be assessed and possibly treated.

OJECTIVES

The student will take adequate action to protect himself from bloodborne pathogens utilizing universal precautions while assessing and possibly treating the patient.

TRAINING AND EVALUATION

Training Outline

1. Universal Precautions is the concept that all blood and certain body fluids are to be treated as if contaminated with Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), or other bloodborne pathogens
2. An acceptable alternative to Universal Precautions is Body Substance Isolation (the treating of all fluids and substances as infectious).
3. Materials requiring universal precautions:
 - a. Blood
 - b. Semen
 - c. Vaginal secretions
 - d. Cerebrospinal fluid
 - e. Synovial fluid
 - f. Pleural fluid
 - g. Any body fluid with visible blood
 - h. Any unidentifiable body fluid
 - i. Saliva from dental procedures
4. Materials not requiring universal precautions unless there is visible blood:
 - a. Feces
 - b. Nasal secretions
 - c. Sputum

- d. Sweat
- e. Tears
- f. Urine
- g. Vomitus

NOTE: Though not required, it be difficult for team members to determine if blood is present, and they should exercise universal precautions if unsure to be safe.

5. Personal protective equipment like gloves and a mask must be used whenever you might be exposed to blood or other potentially infectious materials. Rubber gloves and surgical masks create a basic barrier between the provider and the survivor, and protects both from transmitting potentially harmful diseases. There are some basic rules to follow in exercising Universal Precautions.

a. When conducting a hands-on assessment of a patient, always wear rubber gloves, and if the potential exists for airborne transmission or being splashed with blood or other pathogenic fluids, at least wear a surgical mask and goggles or face shield.

b. Change gloves between patients. This avoids the transmission of pathogens between patients.

c. Use well-fitting, disposable, latex or vinyl gloves for any task involving exposure to blood and other body fluids. Make sure extra pairs are available.

d. Before putting on gloves, make sure they have no holes, cracks or tears.

e. Change gloves if they become torn or dirty.

f. Remove gloves by grasping the cuffs and pulling them off inside out.

g. Use work gloves over latex gloves when working around broken glass or sharp surfaces - for instance when removing a person from an auto wreck or crashed aircraft.

h. Dispose of latex gloves in identifiable medical-waste containers.

i. Wash hands following removal of gloves. Handwashing is the best overall protective measure against most communicable diseases. Wash your hands and other skin surfaces thoroughly with soap and running water immediately after contact with blood or other body fluids. When running water is not available, waterless, hand-wash substitutes should be used until a more thorough handwashing can be accomplished.

Additional Information

More detailed information on this topic is available in Chapter 16 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: The evaluator will moulage a patient for the student to assess. The patient should have formal signs of trauma, preferably with "bleeding" wounds. If multiple patients are to be examined in a large group exercise, insure that the provider changes gloves between patients. If only one patient is to be assessed, determine

verbally what the student would do if multiple patients needed to be assessed. More than one student can be assessed at the same time, but a one-to-one ratio of evaluators to students is preferable.

Brief Student: The student will be briefed to perform a basic assessment of the patient utilizing training and equipment required of all ground team members.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. The student assesses the scene and determines accurately to wear rubber gloves, and face shield and goggles or other eye protection as necessary? | P | F |
| 2. The student properly demonstrates how to remove rubber gloves without exposing himself to potential pathogenic materials. | P | F |
| 3. The student either demonstrates or verbally explains why changing gloves between patients is necessary. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

P-0101
KEEP A LOG

CONDITIONS

You have been assigned to keep a log on a mission, and must log the actions of your unit, section or team on the ICS Form 214 for use during debrief after the mission.

OJECTIVES

Correctly maintain a log of actions during an incident.

TRAINING AND EVALUATION

Training Outline

1. When working an incident, staff members are required to maintain a log of all significant actions. This is important for record keeping of the accomplishments and setbacks, determining search effectiveness during debriefing, and as a legal record of CAP actions amongst many other things.
2. The mission log is started once a unit or section is opened and maintained until personnel are called in and at home safely to the incident commander. A separate log should be maintained for each varying unit or section that is assigned to the incident, and subordinate units at varying levels will normally also keep a log. This log is turned in with the debriefing paperwork and becomes part of the official mission record.
3. The following actions are always recorded in the log:

FOR GROUND OPERATIONS

- a. Departure and return times to mission base.
- b. Routes taken to and from the search area.
- c. Times of entering and leaving search areas.
- d. Any time the search line changes direction.
- e. Times/locations of clue detections or witness interviews.
- f. Time/location of find.
- g. Time/Location of communications checks.
- h. Any event or action related to the team's ability to complete the sortie requirements (natural hazards encountered, injuries to team members, etc.).
- i. Encounters or instructions from local authorities.
- j. Encounters with the media.
- k. Mileage/Flight time at key intersections, when leaving pavement, at other key locations, etc.

l. Time of distress beacon or other emergency signal acquisition.

m. Times distress beacon located and silenced. Also, if available, include the name(s) and organization(s) of person(s) involved in silencing the distress beacon, the manufacturer, serial number, dates of manufacture and battery expiration, vehicle information (type, vehicle registry, description), and the name of the owner.

n. Personnel assignments to and from the team/unit.

Note: this log (ICSF 214) may be kept as an attachment to the CAPF 109

FOR AIRCREW OPERATIONS

a. Briefing details.

b. Names of crew members.

c. Engine start time.

d. Take Off time.

e. Communications checks.

f. Time beginning assigned grid or route.

g. Time departing grid or route.

h. Significant weather, turbulence, other.

i. Time of landing.

j. Time of engine shutdown.

k. Crew changes if any.

Note: this log (ICSF 214) may be kept as an attachment to the CAPF 104

FOR MISSION BASE STAFF OPERATIONS

a. Time/date unit or log started or activated.

b. Name of unit, supervisor, and individual keeping the log.

c. Notes from initial briefing.

d. Time and noted from staff meetings.

e. Significant events, actions taken, direction received or provided.

4. For each log entry, the log keeper writes down:

- a. The time.
- b. The event taking place (see list above)
- c. Mileage and/or location as appropriate.
- d. Name of individual annotating the log each time there is a change.

Additional Information

More detailed information on this topic is available in each emergency services reference text.

Evaluation Preparation

Setup: Prepare narrative of 10 events/actions and times. Provide the individual with the list, a pen, and an ICS Form 214.

Brief Student: Tell the student that he is the log keeper for his unit, and that the 10 events listed in the narrative have occurred. Tell him to log the events/actions on the on team log form.

Note: this evaluation can be accomplished during a training exercise by observing the events taking place and checking the log to see that they are properly annotated.

Evaluation

Performance measures

Results

For each of the 10 events/actions, the student:

- | | | |
|----------------------------------|---|---|
| 1. Logs the time and event | P | F |
| 2. Writes legibly and completely | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

P-0102
CONDUCT PHONE ALERT

CONDITIONS

You are a member of a ground team, and receive a phone call at home alerting you for a mission.

OJECTIVES

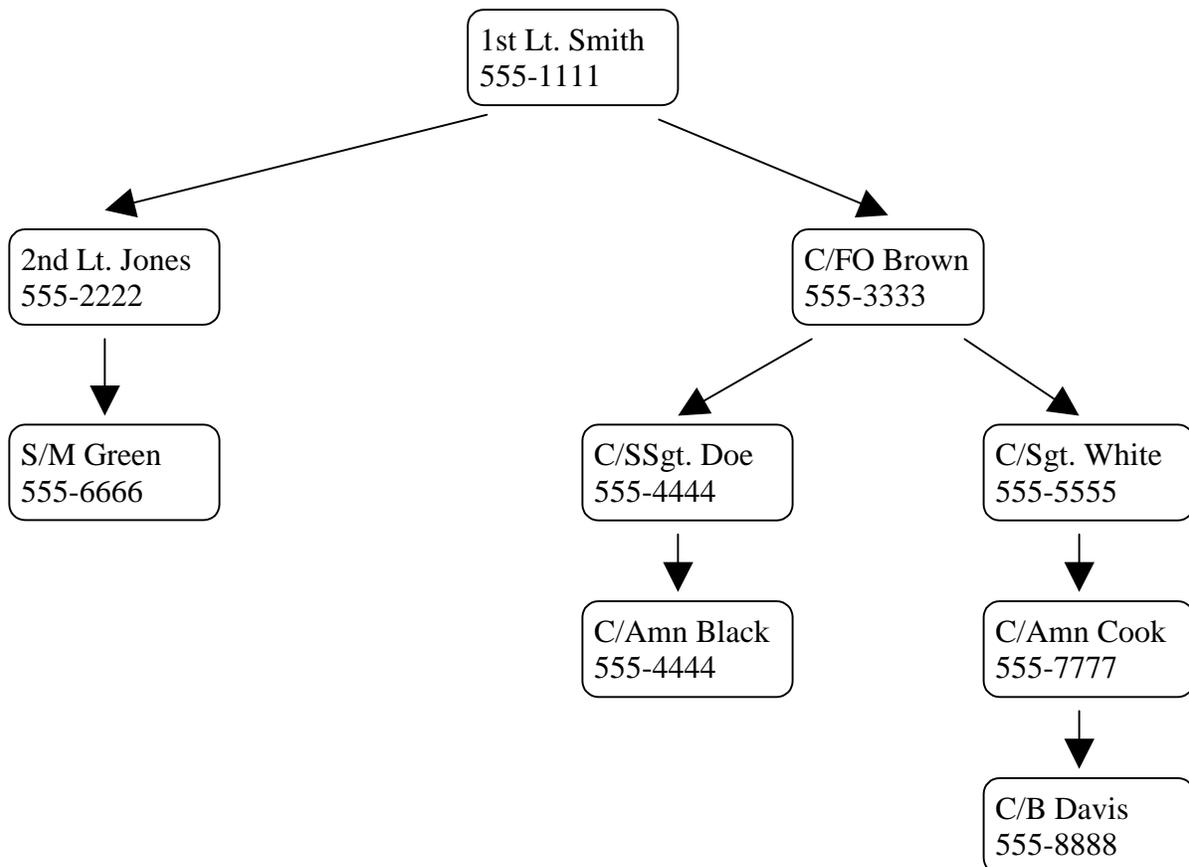
Take the steps necessary to alert all the personnel you are responsible for on the alert roster, passing on all the necessary information.

TRAINING AND EVALUATION

Training Outline

1. Alerting the team is the first step to saving a life. Done correctly, the phone alert quickly notifies all members of the team that a mission is in progress, gives them the information they need to prepare for the mission and move to the team meeting place, and informs the team leader of who will be attending the mission.

a. Your squadron should have an alert roster, which graphically designates who calls who in the event of an alert. The roster will look something like this:



With this diagram, it is easy to see who calls who in an alert. 1st Lt. Smith calls 2nd Lt. Jones and Cadet Brown. 2nd Lt. Jones calls S/M Green. Cadet Brown calls Cadets Doe and White. Cadet Doe calls Cadet

Black. Cadet White calls Cadet Cook, who in turn calls Cadet Davis. This chart also assumes that 1st Lt. Smith is the squadron commander. If for some reason the squadron commander is not the main POC for missions in the unit, then the commander should be notified that the squadron has been alerted.

b. The team leader or designated individual must ensure the alert roster is kept up to date as members leave or join the team.

c. When a team leader starts the alert by "calling down the alert roster," he or she needs feedback. The personnel on the alert roster must confirm that they have passed the information on to those they were supposed to call, report on whom they could not reach, and report who will be attending the mission. This last piece of information can be critically important in determining how much transportation is needed. Accomplishing this can be done one of two ways. First, when the people at the bottom of the roster have been called, the people who called them should call back UP the roster, telling the person who called them, whom they contacted, whom they did not contact, and who will be attending the mission. Second, last member notified in the chain contacts the squadron POC initiating the alert (in this case probably 1st Lt. Smith) before departing for the meeting place with the same information.

d. The biggest problem with alert rosters occurs when you cannot reach someone you are supposed to call. If this happens, you must take responsibility for calling all the personnel that person was supposed to call. If you do not, those personnel will never be alerted.

2. When you receive an alert call:

a. Ensure the person tells you (at a minimum):

1. Type of Mission
2. Expected Duration of Mission
3. Time and Location of Meeting Place
4. Any special instructions.
5. Mission number
6. Their call back number

b. Write down all this information. Do not trust your memory.

c. Call those people directly below you on the alert roster. If one of those people is not available, call all the people that person would call. (if you could not reach them because of a busy signal, make sure to try again later.) Pass on all the information. Find out if they will be able to attend the mission.

d. If the personnel you call are at the bottom of the roster, after you call them, call the person who called you or the alerting officer and report who you reached, who you did not reach, and who will be attending as advised during your alert briefing.

e. If the personnel you call have other people to call, wait until they call you back with their report. Then call and report to the person who called you.

f. Keep conversations short and keep the phone line open as much as possible. Someone may be trying to call you with a report or an update to the information.

Additional Information

More detailed information on this topic is available in Chapter 17 of the Ground Team Member & Leader Reference Text.

Evaluation Preparation

Setup: Prepare an alert roster and give a copy to the student.

Brief Student: Show the student where he is on the roster (it does not have to really be his name. Just ensure that the name you pick is someone in the middle of the roster). Tell the student that you will simulate an alert call, and that the student should take all necessary actions, including simulating the calling of all the personnel that they should call on the list. Tell him that you will play the role of anyone he calls. Then “call” the member and pretend to alert them for the mission. Ensure you leave out one of the required elements of the alert call (listed in paragraph 2 above). When they simulate calling others, have one of those people not be home.

Evaluation

| <u>Performance measures</u> | <u>Results</u> | |
|---|----------------|---|
| When alerted, the individual: | | |
| 1. Asks questions to ensure he or she knows the Type of Mission, Expected Duration of Mission, Time and Location of Meeting Place, Mission number, any special instructions and call back number. | P | F |
| 2. Writes down all information | P | F |
| 3. Calls all personnel directly below him/her on the alert roster. | P | F |
| 4. Passes on all information, and finds out who will be attending | P | F |
| 5. If someone is not there, call the personnel that person was responsible for calling. | P | F |
| 6. Follows correct procedures to report back up the roster after making the calls. | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

L-0001
BASIC COMMUNICATIONS PROCEDURES FOR ES OPERATIONS

CONDITIONS

You are a member of the CAP mission staff performing a task in which the use of a radio is necessary.

OBJECTIVES

Properly operate a CAP radio.

TRAINING AND EVALUATION

Training Information Outline

1. From time to time, duties may require the use of a CAP radio. This is not a difficult task, but does require some knowledge of operating procedures and equipment.
2. You should be able to demonstrate the following skills:
 - a. Demonstrate the proper method to contact another station.
 - b. Demonstrate knowledge of call signs.
 - c. Demonstrate knowledge of basic prowords.
 - d. Demonstrate ability to operate basic radio equipment.
 - e. Demonstrate knowledge of prohibited practices.
 - f. Demonstrate knowledge of National communications policies.
 - g. Demonstrate knowledge of local operating practices.
 - h. Demonstrate knowledge of region, wing, and local policies.

Additional Information

Additional information is available in CAPR 100-1 Vol. 1 and the "Radiotelephone Procedures Guide."

Evaluation Preparation

Setup: The student is provided with a basic radio (volume, squelch, channel controls) and asked to communicate with another station. At least one radio will be needed for this exercise. The pro-words "roger," "over," "out," affirmative," should be used. The exchange should go through several transmissions with questions and answers. Prohibitive practices, such as "chit chat," should be used or discussed.

Brief Student: The student is at mission base and has been assigned the task of reporting when the director of the local office of emergency management arrives for his/her tour of the facility.

Evaluation:

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Listen before transmitting | P | F |
| 2. Demonstrate calling procedures including call signs | P | F |
| 3. Demonstrate use/understanding of basic prowords | P | F |
| 4. Demonstrate understanding of radio equipment including finding local repeater/simplex | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

L-0002
PERFORM RADIO OPERATING PROCEDURES

CONDITIONS

You are a mission radio operator at a mission base.

OBJECTIVE

Properly operate a mission base radio system.

TRAINING AND EVALUATION

Training Information Outline

1. A Mission Radio Operator is required to maintain communications with all mission assets (aircraft, ground teams, flight line and forward bases). This allows for sending new instructions, reporting mission information and as a safety measure for keeping track of people in the field.

2. You should be able to demonstrate the following skills:

- a. Demonstrate the proper method to contact another station.
- b. Demonstrate knowledge of the International Phonetic Alphabet.
- c. Demonstrate knowledge of CAP Prowords.
- d. Demonstrate knowledge of international urgency signals.
- e. Demonstrate the ability to maintain a communications status board.
- f. Demonstrate a familiarity with standard equipment and local communications operations.
- g. Demonstrate the proper use of standard radio equipment.
 - 1) Set volume and squelch levels appropriately
 - 2) Demonstrate proper use of microphone

Additional Information

Additional information on this topic can be found in The Radiotelephone Procedures Guide.

Evaluation Preparation

Setup: Provide the student with a message to reassign an aircraft to another grid, a status board, a radio, paper and pencil/pen.

Brief Student: Ask the student how they would contact an aircraft flying a sortie. Tell the student that he needs to transmit the change of grid assignment to the aircraft. Transmit an urgency signal to the student and ask them to identify the meaning of the signal and what action that they should take.

Evaluation:

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| 1. Demonstrate setting volume and squelch levels for proper function | P | F |
| 2. Demonstrate proper microphone technique | P | F |
| 3. Demonstrate listening before transmitting | P | F |
| 4. Properly call and acknowledge aircraft | P | F |
| 5. Send change of grid assignment, using proper phonetics and prowords | P | F |
| 6. Correctly interpret urgency signal and take appropriate action | P | F |
| 7. Update mission communications status boards | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

EMPLOY APPROPRIATE RADIO FREQUENCIES AND REPEATERS

CONDITIONS

You are the radio operator for a ground team, and have been told by the team leader to contact another station. You must choose what frequency to use.

OBJECTIVE

Within 2 minutes, identify the appropriate frequencies and channels used for ground operations.

TRAINING AND EVALUATION

Training Information Outline

1. Ground Search and Rescue Teams use a number of VHF-FM frequencies to communicate with mission base, other ground teams, and aircraft.
2. Frequency assignments are usually given by the communications unit leader based on the following.
 - a. Simplex Frequencies (VHF-FM): Short range communications where units are operating on the same transmit and receive frequency
 - b. Duplex Frequencies. Longer range communications are accomplished through the use of a repeater. All repeaters are accessed by transmitting a subaudible tone through the radio. The 100.0 Hz tone will activate any CAP repeater, but is used only in emergencies and to request the proper tone frequency for the repeater in use. Other tones are programmed into the radio as required. The communications unit leader will brief teams on what frequency and tones to use to access local repeaters.
 - c. VHF-AM (Airband) SAR Frequencies: These are dedicated frequencies authorized for training and actual missions that can be accessed by any aircraft.
 - d. National HF Frequencies: These are frequencies coordinated by National Headquarters. Some teams may be deployed with HF radios on these frequencies during disasters to serve as relay points out of affected areas.
 - e. Region HF Frequencies: These are frequencies established for HF operations within a region. Teams may also be deployed and operate on these frequencies to transmit greater distances than traditional VHF-FM assets used by ground teams.
 - f. Other frequencies are used to communicate with police, Coast Guard, and other SAR agencies. Again, the communications unit leader will brief on the use of these frequencies.

Additional Information

Additional information on frequencies used in CAP and repeater locations can be found in CAPR 100-1 Vol. 1, chapters 7, 9, & 10, and The Communications Directory. Wing Communications Operations and Training plans will also contain important information for your area.

Evaluation Preparation

Setup: Prepare a list of the five frequency groups listed above for your area of operation with assignments in each group. Give the list to the trainee. The student may use any item from his field gear, including this book or a “cheat sheet”.

Brief Team Leader: Tell the student to identify each frequency and its use, within 2 minutes total time.

Evaluation:

| <u>Performance measures</u> | <u>Results</u> | |
|--|----------------|---|
| The individual identifies: | | |
| 1. Identifies the primary simplex frequency and its use. | P | F |
| 2. Identifies the alternate simplex frequency and its use. | P | F |
| 3. Identifies the ground to ground frequency and its use. | P | F |
| 4. Identifies the primary duplex frequency pair and its use. | P | F |
| 5. Identifies the alternate duplex frequency pair and its use. | P | F |
| 6. Identifies the primary HF SSB frequency for the region | P | F |
| 7. Identifies the alternate HF-SSB frequency for the region | P | F |
| 8. Completes all steps within 2.5 minutes | P | F |

Student must receive a pass on all performance measures to qualify in this task. If the individual fails any measure, show what was done wrong and how to do it correctly.

**SPECIALTY QUALIFICATION TRAINING RECORD (SQTR)
Ground Team Member – Level 3**

| | | |
|------------------------|-------|-------------|
| NAME (Last, First, MI) | CAPID | DATE ISSUED |
|------------------------|-------|-------------|

Prerequisites

| Item | Date Completed |
|---------------|----------------|
| Qualified GES | |

The above listed member has completed the required prerequisite training for the ground team member – level 3 specialty.

UNIT/WING/REGION COMMANDER OR
AUTHORIZED DESIGNEE'S SIGNATURE

DATE

Familiarization and Preparatory Training

| Task | Evaluator's CAPID and Date Completed |
|--|---|
| Complete Task O-0001 Prepare Individual Equipment | |
| Complete Task O-0002 Conduct Individual Refit | |
| Complete Task O-0003 Prevent and Treat Hot Weather Injuries | |
| Complete Task O-0004 Prevent and Treat Cold Weather Injuries | |
| Complete Task O-0101 Identify Natural Hazards | |
| Complete Task O-0102 Prevent and Treat Fatigue | |
| Complete Task O-0103 Conduct Field Sanitation and Hygiene | |
| Complete Task O-0201 Use a Compass | |
| Complete Task O-0601 Conduct actions if Lost | |
| Complete Task O-0902 Exercise Universal Precautions | |
| Complete Task P-0102 Conduct a Phone Alert | |

The above listed member has completed the required familiarization and preparatory training requirements for the ground team member - level 3 specialty qualification and is authorized to serve in that specialty while supervised on training or actual missions.

UNIT/WING/REGION COMMANDER OR
AUTHORIZED DESIGNEE'S SIGNATURE

DATE

Advanced Training

Evaluator's CAPID and
Date Completed

| Task | Evaluator's CAPID and Date Completed |
|---|---|
| Complete Task O-0301 Determine Distress Beacon Bearing | |
| Complete Task O-0302 Locate a Distress Beacon | |
| Complete Task O-0403 Employ Search Techniques while on foot | |
| Complete Task O-0404 Move as Part of a Search Line | |
| Complete Task O-0405 Communicate to Other Members of a Search Line | |
| Complete Task O-0406 Use Whistle Signals | |
| Complete Task O-0407 Conduct Attraction Techniques | |
| Complete Task O-0408 Identify Aircraft Search Clues | |
| Complete Task O-0409 Identify Missing Person Search Clues | |
| Complete Task O-0410 Mark a Route or Search Boundary | |
| Complete Task O-0411 Conduct individual actions on locating a clue | |
| Complete Task O-0412 Conduct individual actions on "find" | |
| Complete Task O-0413 Participate in a hasty search | |
| Complete Task O-0502 Participate in a litter carry | |
| Complete Task O-0702 Use a signal mirror | |
| Complete Task L-0001 Basic Radio Procedures for ES Operators | |
| Complete Task L-0002 Perform Radio Operations Procedures | |
| Complete Task L-0003 Employ appropriate radio frequencies and repeaters | |
| Complete Task P-0101 Keep a Team Log | |
| Complete Basic First Aid | |
| Complete Basic Communications User Training | |
| Complete the appropriate portion of CAPT 117, <i>Emergency Services Continuing Education examinations</i> | |

Exercise Participation

The above listed member satisfactorily participated as a ground team member – level 3 trainee under my direct supervision on mission number _____.

QUALIFIED SUPERVISOR'S SIGNATURE DATE

The above listed member satisfactorily participated as a ground team member – level 3 trainee under my direct supervision on mission number _____.

QUALIFIED SUPERVISOR'S SIGNATURE DATE

Unit Certification and Recommendation

The above listed member has completed the requirements for the ground team member – level 3 specialty qualification and is authorized to serve in that specialty on training or actual missions.

UNIT/WING/REGION COMMANDER OR
AUTHORIZED DESIGNEE'S SIGNATURE DATE