
Basic Signaling



Once you find yourself in a survival situation, one of your main priorities of survival is to communicate with any Search & Rescue teams that may be looking for you. You must first get your rescuer's attention, and then relay a message any potential rescuers will understand.

You need to become familiar with a variety of signaling techniques and devices you can use. Learn how to use them and think of ways you can adapt them for use in different environments. Practice using these signaling techniques and devices before you actually need them. Practicing any signaling techniques before you need them will improve your chances of getting out of a survival situation successfully.

Just as the Rule of Threes in survival, there is an international Rule of Threes used to signal distress. Nature does not normally replicate anything in groups of three, so anything in threes draws attention and thought to be manmade. Three of anything repeated in a regular pattern is recognized around the world as a distress signal by Search and Rescue teams.

The key to survival rescue is to draw attention and get noticed. Straight lines, geometric angularity, and square corners are not normally found in nature, and knowledge of this can be used to create signals that can be recognized by searchers on the ground and in the air. Geometric patterns using straight lines, circles, triangles, or Xs displayed in open areas will attract attention. A large fire or flashes of light also draw attention, as do large, bright colored contrasting object moving slowly across an open area.

Whatever signaling technique or device you learn to use, know how to use it effectively and be ready to put it into use on short notice. You need to find the largest available clear and flat area on the highest possible terrain. Pick an area that is visible from the air. Use the most obvious a signal you can create. However, whenever possible you should avoid using signals or signaling techniques that can place you in danger.

Methods of Signaling

There are two main ways to get attention or to communicate - visual and audio. The means you use will depend on your situation and the material you have available. Whatever the method, you need to always have visual and audio signals ready for use.



Audio Signals

Audio signals are used to draw the attention of Search and Rescue Teams. In most cases, audio signals are made by the use of a whistle, but can also be made by banging out an SOS signal with a large stick against a log or tree.

Whistles

Whistles provide an excellent way for signaling, since they are louder than a human voice yelling, travel further than voice sounds, and won't fatigue or tire out with continued attempts to signal. In some documented cases, they have been heard up to a mile (1.6 kilometers) away. Specialty whistles have a greater range than a standard "coaches" type of whistle and both have a greater range than a human whistle.

A series of three short bursts of a whistle made in the four cardinal directions will travel well, and since the bursts are again in groups of three, it will be recognized as the international distress call. This can be done three to four times an hour without inducing fatigue or taking time and energy from your other survival efforts.

Tree Knocking and Log Signals

A simple SOS message can be transmitted by banging or knocking a stick about the size of an ax handle against a down log or tree, or even against a standing live tree. While this signal may only be heard within a distance of 1 mile, it will attract the attention of any Search and Rescue Teams in the area.

Again, a series of three bangs or knocks will be recognized as the international distress signal, and can be done three to four times an hour without taking time and energy away from your other survival efforts.

Visual Signals

Visual signals are used to make your presence known to Search and Rescue Teams, and include fire, smoke, flashlights, and other means of signaling.

Fire

During darkness, fire is one of the most effective visual means for signaling. Build three fires in a triangle (the international distress signal) or in a straight line with about 25 feet apart the fires. Build them as soon as time and the situation permit and protect them from the elements until you need them. If you are alone, maintaining three fires may be difficult, so concentrate your efforts on maintaining one fire.



The hot coal bed left by a fire also may be seen by aircraft that are equipped with thermal cameras and scanners, so the coals left by a recent fire can also indicate your position even if your fire burns down.

When constructing signal fires, you must consider your geographic location. In a jungle, find a natural clearing or the edge of a stream where you can build fires that the jungle foliage will not hide. You may even have to clear an area. In a snow-covered area, you may have to clear the ground of snow or make a platform on which to build the fire so that melting snow will not extinguish it.

You can make a tree torch by burning tree as another way to attract attention. You can set pitch-bearing trees afire, even when green. Always select an isolated tree so that you do not start a forest fire and endanger yourself.



Smoke

During daylight, you can construct a “smoke generator” and use smoke to gain attention. This creates contrast with the background; dark smoke against a light background and vice versa. If you practically smother a large fire with green leaves, moss, or a little water, the fire will produce white smoke.

If you add rubber or oil-soaked rags to a fire, you will get black smoke. In a snowy environment, black smoke can be seen for miles.

In a desert environment, smoke hangs close to the ground, but a pilot flying overhead can spot it in open desert terrain.

Smoke as a method of signaling is effective only on comparatively calm, clear days. High winds, rain, or snow disperse smoke, lessening its chances of being seen.

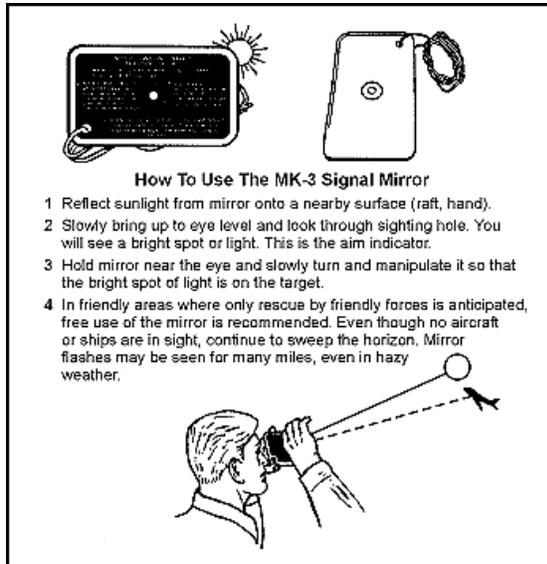




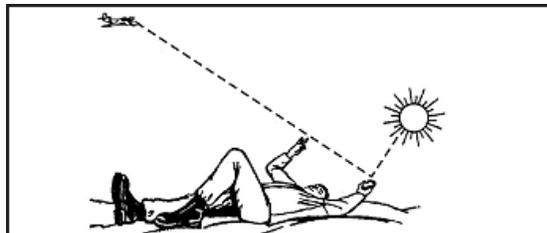
Mirrors and Reflective Objects

On a sunny day, a mirror is your best signaling device. If you don't have a mirror, polish a sierra cup, a canteen cup, the bottom of a drink can, your belt buckle, or a similar object that will reflect the sun's rays. Practice using a mirror or shiny object for signaling before going out in the bush; don't wait until you're lost and need it. If you have a signal mirror, follow the instructions on the back of the mirror or in the instruction sheet that was contained in the package.

Wear the signal mirror on a cord or chain around your neck or attached to a belt loop so that it is ready for immediate use.



An easy method of aiming a signal mirror is to catch the reflection on the palm of your hand or in between two fingers held up in a "V". Now slowly move your hand so that it is just below your aim point or until the aircraft is between the "V" in your fingers, keeping the glare on your palm. Then move the mirror slowly and rhythmically up and down off your hand and onto the aim point.



You can also use a fixed aim point to orient and direct your signal toward an approaching aircraft. A down tree, large stump or a stick placed in the ground can serve as a fixed point to aid in your signaling.



Haze, ground fog, and mirages may make it hard for a pilot to spot signals from a flashing object; so if possible, get to the highest point in your area when signaling. If you can't determine the aircraft's location, flash your signal in the direction of the aircraft noise. Pilots have reported seeing mirror flashes up to 96 miles (160 kilometers) away under ideal conditions.



Flashlights

At night you can use a flashlight or a strobe light to send an SOS to an aircraft or search teams. Some flashlights have different color lenses that can be used to product a more noticeable light signal. Again, a series of flashed in sets of three would be noticed and realized as a signal of distress.

Emergency Codes and Signals

As important as attracting attention, you need to know how to provide information to any potential rescue teams. It is essential learn some of the symbols and codes that all aircraft pilots understand, since many search and rescue groups use aircraft support in their initial search efforts.

SOS

You can use lights or flags to send an SOS - the internationally recognized distress signal in radio Morse code - three dots, three dashes, and three dots. A dot is a short, sharp pulse; a dash is a longer pulse. When using a whistle or a flashlight, keep repeating the signal at regular intervals. When using flags, hold flags on the left side for dashes and on the right side for dots.

Ground To Air Emergency Code

This code consists of five definite, meaningful symbols. Ideally you should make these symbols a minimum of 10 feet wide and 15 feet long, but each signal should be a minimum of 3 feet wide and 3 feet high to ensure visibility. Make the signal contrasts as much as possible with the ground that it is on. Ground to Air signals may be constructed from any available materials such as logs, leaves, grass, or even cloth material.

Message	Code symbol
Require assistance.	V
Require medical assistance.	X
No or negative.	N
Yes or affirmative.	Y
Proceed in this direction.	↑



Remember straight lines, geometric angularity, and square corners are not normally found in nature, and again you must construct the signal to contrast as much as possible with the natural background. The signal may be made by breaking and bending over crops or tall grass in a field or trampled down into snow or sandy soil. Just try to ensure that it is in an open area that can be easily spotted from the air.

Body Signals

When an aircraft is close enough for the pilot to see you clearly, you can use body positions or movements to convey a message. This method is not always reliable since it is difficult to determine if an aircraft pilot has actually seen you and identified you as a person on the ground.

 Can proceed shortly; wait if practicable.	 Land here (point in direction of landing).	 Need mechanical help or parts; long delay.	
 All OK; do not wait.	 Do not attempt to land here.	 Pick us up; aircraft abandoned.	 Use drop message.
 Affirmative (yes).	 Negative (no).	 Our receiver is operating.	 Need medical assistance <i>urgently</i> .

Aircraft Acknowledgement

Once the pilot of a fixed-wing aircraft has sighted you, he will normally indicate he has seen you by flying low, moving the plane or “tipping” the wings in a side to side pattern, and flashing lights. Be ready to confirm your original message and be prepared relay other messages to the pilot once he acknowledges that he received and understood your first message.

Simply because you have made contact with Search and Rescue team does not mean you are safe. Since it may take a rescue team some time to get to your location, continue to work on your priorities of survival until you are actually rescued.