

GECO Non-Radio EmComm Signals



GECO believes people and communities must be prepared to stand on their own in a disaster. This doesn't mean they shouldn't expect outside help. We mean that people should be active in their own rescue. They should not sit on the sidelines as helpless victims waiting to be rescued.

Non-Radio GTA Signals

Our assumption is that in remote areas, helicopters may be the first outside contact.



Ham radios don't "talk" with aircraft radios. But hams equipped with non-radio EmComm methods can make effective initial communications. Using the community-based education model (also developed by Greg Lee), the non-radio ground-to-air(GTA) signals could be taught as elementary school lessons. This gives students a practical use of their class lessons AND have an active role in local emergency preparedness. This makes young students an integral part of the community and fosters the next generation of EmComm operators. The idea is for people to prepare their own rescue. Being pro-active helps disaster survivors avoid and minimize the "helpless victim" mentality that often brings depression.

The use of non-radio GTA signals use readily available local materials. Many of the items can be easily found in the aftermath of a disaster. Preparing a handy kit of essentials (e.g. matches, magnifying glass, mirror, etc.) is easy to do. If more than one person in a village has this sort of kit, resilience is easy to develop.

Once initial communications are established, relief professionals will likely take over. The GECO ham will hand over the situation within 72-hours.

Note: Use the links below to see the complete 3 lesson set on Non-Radio GTA signals.

[GECO Non-Radio GTA Signals Part 1: What a Spotter Looks For](#)
[GECO Non-Radio GTA Signals Part 2.2: Selected GTA Signals](#)
[GECO Non-Radio GTA Signals Part 3.2: Basic LZ / DZ Support](#)
[GECO Non-Radio GTA Chart](#)

Method	Use
Smoke	
Mirrors	
Symbols	
Signal Panels	
Gestures	
Fire	
Morse Lamp	

Non-Radio Ground Signals

A set of standard ground signals should be used to alert villagers to danger, summon them to gather, signal them to evacuate, or other relevant actions suitable to the local geo-hazards. We are not aware of any international signals for these situations.

Audible	Examples	Day	Night
	A1- Whistles	X	X
	A2- Sirens	X	X
	A3- Loud speakers	X	X
	A4- Gongs, Bells, Chimes	X	X
	A5- Gunshots	X	X

Check with local emergency authorities for any standard signals they use in your area. If there are none, you can make up your own signals. Be sure to give a copy of these to the local authorities so they know the signals you are using.

A 1. Whistles: You can send an SOS using a whistle. The code is the same as Morse Code: three dots, three dashes, and three more dots. A dot is a short, sharp pulse about 3-seconds duration; a dash is a longer pulse, about 6-seconds long. Keep repeating the signal as often as you can stand it, and as long as needed.



A2. Sirens: Sirens are common civil defense warning signals in various countries. Sirens are used to signal air raids, tsunami warnings, tornadoes, lightning, among others. If sirens are used in your area, get information from local civil authorities and make sure you know the signals. In the US, sirens alert people to tune their AM/FM radios for emergency broadcasts. If there are no siren systems in your area, consider downloading a siren audio file to your computer. The computer can be linked to a public address / loud speaker system and played in an emergency to alert the community.

A3. Loud speakers: In many Asian countries, villages have loud speaker systems for daily public announcements. When I lived in Thailand, the daily announcements were made at a specific time in the morning. If people heard the loud speaker at other times of the day, it was unusual, and caught people's attention.



A4. Gongs, Bells, Chimes: These signals may have given way to more modern devices in industrialized countries. But they can be very simple and expedient signal devices in poor rural areas. A discarded brake drum from the junk yard makes a excellent warning gong.

A5. Gunshots: If you have a gun, firing 3 shots spaced five-seconds apart is a distress signal. If others are close by, the intervals between shots may let them deduce the direction from which the shots come. Also, the pre-meditated spacing of the shots prevents people from thinking you are hunting.



Sticky Notes

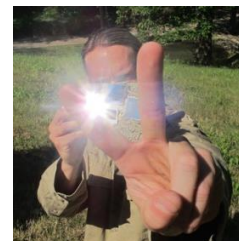
GECO Newsletter, Vol. 2, No. 1, 9 Jun 2016

Visual	Examples	Day	Night
	V1. Mirror Flashes	X	
	V2. Smoke / Flares	X	
	V3. Flags	X	
	V4. Lights/Flashlights		X
	V5. Flares		X
	V6. Fires		X

Visual signals fall into two broad categories: Day or Night. Be prepared and have the necessary materials to make / use these signals. You make yourself more visible by being on high ground and in the open. Be aware of being a strong contrast to your surroundings.

Be sure to coordinate with neighboring villages. It would be helpful to have common signals between villages. This way some information can be passed from one village to another. While this may sound outdated, consider that signal fires along the Great Wall of China relayed military messages for many miles along the wall. In 1794, France had a semaphore signal system that could convey messages over 230 km / 143 mi in less than an hour. Some of these low-tech signaling methods may be more robust and can be implemented in the rubble of a disaster area.

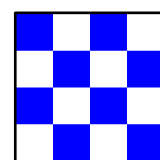
V1. Mirror Flashes can be seen from a long distance away. Repeated flashes toward the horizon in all direction can catch the eyes of air crews and lead rescuers to your location. Repeated flashes are not something normally occurring in nature. Once the aircraft is closer, be careful not to blind the pilots. Switch to another visual signal such as smoke, flags, or marker panels.



V2. Smoke / Flares are the next best for visibility at long range. Learn to make a smoky fire and be careful not to cause a wildfire. Commercially made flares are available. But they may not be readily available or affordable in remote areas. They also expire with age. Smoke is also useful

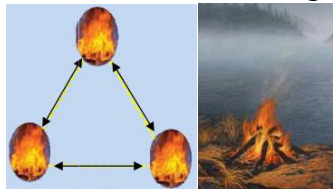
for helicopter crews to assess wind speed and direction when approaching your position.

V3. Flags / Panels: Commercial shipping and many national coast weather services have standard flag signals. For most people in distress, any brightly color fabric that contrasts with your surrounds can help searchers find you. Get to a high spot and open ground to increase your chances of being seen. You can consider a simple three color flag system: Green = OK; Yellow = need assistance; Red = Danger, urgently need help. Whatever system you create, give a copy to local authorities.



V4. Lights / Flashlights: If you know Morse Code, you can use a flashlight to send messages. But most people don't know it. In the high stress of a disaster, follow the simple rule of threes: flash the light 3 times in quick succession to call for help. Respond to a call of help with one long flash. If you make up other light signal codes, be sure to give a copy to local emergency authorities.

V5. Flares: These are commercially available, but may not be practical or affordable in less developed countries. There are two distinct hazards to using flares: fire / burns, and loss of night vision. Use them if they are available. They are particularly useful when wet conditions make it difficult to start a signal fire.



V6. Fires: Signal fires at night can be spotted from a long distance. A pattern of 3 fires spaced 8m apart is an international distress signal. If time, materials, and space are limited, a single fire can do. Be careful your signal fire doesn't spread and create a hazard for you and other survivors. You will need to plan to have an adequate supply of materials ready and be able to light the fire when you need it.

Every person, family, community and situation is different. Now that you are aware of various non-radio signaling methods, consider your needs and those of your neighbors and community. The best time to prepare for an emergency is before it happens. Emergencies and disasters tend to happen suddenly, very rapidly cause disruption, chaos, and confusion. Getting and conveying accurate information to others is vital to survival. EmComm hams strive to use their radios to meet this need. However, there are other communication tools, methods, and skills available. When a disaster occurs, well-prepared EmComm hams will use whatever communications tools are at hand. How full is your EmComm "tool box?" ♦

How Prepared Are You to Respond?

When you go to help at an accident or emergency, what do you take with you? You may not have time to prepare. But showing up without the proper equipment may limit your ability to help. To help you prepare your, consider some of the items on the check lists below. Every EmComm ham is different.



EmComm Ham’s Communications Tool Box Inventory							
Radio Communications Gear				Non-Radio Communications Gear			
Radio	Type: <input type="checkbox"/> VHF <input type="checkbox"/> UHF <input type="checkbox"/> HF			Audio	<input type="checkbox"/> Whistles		
	<input type="checkbox"/> AM/FM Rx <input type="checkbox"/> Other				<input type="checkbox"/> Sirens		
	Batteries: <input type="checkbox"/> Spare <input type="checkbox"/> Auxiliary				<input type="checkbox"/> Loud speakers		
	Battery Chargers				<input type="checkbox"/> Gongs, Bells, Chimes		
	Antenna: <input type="checkbox"/> VHF <input type="checkbox"/> UHF <input type="checkbox"/> HF				<input type="checkbox"/> Gunshots		
	<input type="checkbox"/> Spare <input type="checkbox"/> Portable			Visual	Day	<input type="checkbox"/> Mirror Flashes	
Phone	Batteries: <input type="checkbox"/> Spare <input type="checkbox"/> Auxiliary					<input type="checkbox"/> Smoke / Flares	
	Chargers: <input type="checkbox"/> HT <input type="checkbox"/> 12V				<input type="checkbox"/> Flags		
Tools & cable	<input type="checkbox"/> Basic tool kit				Night	<input type="checkbox"/> Lights/Flashlights	
	<input type="checkbox"/> Coax cable, connectors, adapters					<input type="checkbox"/> Flares	
	<input type="checkbox"/> Rope, guy line			<input type="checkbox"/> Fires			

There is no right / wrong to being prepared. Do your best. You may want to team up with another ham to divide up the list. Team work can help overcome individual limits. 🌱