

Communication

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A typical RAAM setup is several vehicles each with several crew; some of these vehicles may also have Racers in the case of Teams. At any given time during the race the Support Vehicles of a Racer may be spread out over miles. Keeping this caravan of Crew, Support Vehicles, and Racers moving and coordinated requires communication. This article will explore some of the options available for communicating between vehicles and communicating with the Racer on the road.

Vehicle to Vehicle

The following are some of the options for communicating between your vehicles. Every one of them has limitations. You should expect that there will be times when you may not be able to reach your other vehicles. This is part of the challenge of the race. You should have backup plans in case communication isn't possible.

Remember 15 years ago technology was far different leaving communication strategies much more difficult.

Cell Phones

The most obvious choice today to communicate between vehicles is cell phones. They are ubiquitous and it's likely every member of your crew will have one.

The route traverses some very isolated areas, especially in the first quarter of the race. For any given provider/carrier you can probably expect coverage over 65-70% of the course. Based on conversations with Racers it appears the carriers with the best coverage are AT&T/Cingular and Verizon Wireless. If you have both of these you may get 75% coverage.

Another option to consider is TracFone (www.tracfone.com). They are not a carrier but sell phones that work on any network. With these phones you buy minutes and can restock as you need to. The estimated coverage with these phones is 75-80% because they cover just about all the networks. You can order these phones online or most Target and Wal-Mart stores carry them.

A few tips:

- Assign a phone to each Support Vehicle and keep it there.
- Make sure you have a car charger.
- Give your vehicles names so they are easy to identify.
- Crew may not want to use their own minutes.

Also be aware that some cities and states in the US now have laws requiring the driver to wear a headphone if they are going to talk on a cell phone. As always use caution when answering and talking on a cell phone, especially as the driver.

Satellite Phone

Satellite phones have better coverage though still not 100%. Often these don't work within vehicles and require external antennae.

The best choice is to rent one since they are expensive to buy and maintain. Renting is relatively cheap, but the charge per minute is often a dollar or more. If you search the internet for 'Satellite Phone Rental' you will find many options.

Handheld Radios

Handheld radios are great for communication when Support Vehicles are very near each other. Their range is limited by the type of radio and by terrain. At their best their range is approximately 10 miles and expect significantly less in mountainous areas.

- Assign one to each vehicle
- Make sure you have spare batteries or have a car charger.
- You can buy these almost anywhere – Radio Shack, REI, Target.
- Motorola claims to have radios with ranges in excess of 20 miles.

CB-Style or Other Radios

There are many different options for radios from simple CB radios, to Motorola radios, to Shortwave radios. They vary in price and range and all have their limitations. You can easily purchase a CB type radio at Radio Shack. For the more powerful radios, such as those by Motorola, your best option may be to rent them. Search the internet for Motorola radio rental. If you don't plan on keeping these types of radios, renting is the best option.

Smoke signals

In the early years of the race, smoke signals were a common means of communication. Smoke signals had many limitations including the necessity of carrying wood, visibility problems at night, wind, crossed signals between Racers, and the time necessary to generate a fire. We are fortunate today to technology which enables reliable and faster communication.

Communicating with the Racer

Besides communicating between vehicles you will need to communicate with the Racer. The most basic information to communicate to the Racer is turns, but this can easily extend to providing race statistics, talking strategy, encouragement, and more. Once again there are many options and it will depend on the Racer.

Most of these are more relevant for Solo Racers or Racers who are on the course for more than 60 minutes at a time. At the very least though you will need to inform your Racer of turns.

You should talk with your Racer about what they want or need. Do they want to be able to talk with the Crew on a regular basis? Do they like the solitude of just riding?

PA Systems

This is a one-way system. This involves a CB-like device on the inside and a speaker on the outside. Some are powered via 12V, some need to be wired to a battery. Here's a sample of one

(<http://www.radioshack.com/product/index.jsp?productId=2572006&cp=&pg=2&sr=1&origkw=pa+system&kw=pa+system&parentPage=search>).

These can also be somewhat effective for playing music though PA speakers usually aren't sufficient for music.

Bullhorn

This is a very simple PA system. Smaller ones may or may not work depending on the volume. Large ones are effective, but take up a lot of space. These can be anywhere from \$25 to \$100.

Horns

It is possible to arrange horn signals, such as one short honk for left, two short honks for right. Honks can be jarring, especially later in the race. And who knows if you and your Racer are going to remember whether one honk is for left or right.

Handheld Radios

Handheld radios can be a good option for communicating with the Racer. They are relatively lightweight and are good for the short range between the Support Vehicle and Racer.

You can use the handheld radio in two modes. The first is a one-way mode where you just provide information to the Racer. If you want the Racer to be able to communicate with you make sure it is easy for the Racer to talk and not have to fiddle with buttons or moving the radio. It will distract from their racing effort and can be unsafe.

These are easy to find, even at Target. This is two radios with a range of anywhere from a mile to ten miles. Range can vary depending on terrain and the type of radio. They range in price from \$20 to over \$100.

Motorola Radios (or similar)

These are stronger radios, like the ones you might find being used in the Tour de France, with two-way communication. The best solution is to rent one of these. Search the internet for Motorola Radio Rental and you'll find many options.

For any radio on a Racer, an earbud is allowed in one ear, both ears may NOT be covered.

Roadside Information

The simplest means of communicating to the Racer is to provide information from the side of the road as they race by. This needs to be very short and very concise, except perhaps on an uphill because the Racer will hear you for two seconds and then they are gone.

Direct Support

If you are doing Direct Follow support behind a Racer you can pull up alongside the Racer for one minute four times per hour to communicate.

If you are doing leapfrog support (not direct follow support), do NOT drive up to the Racer, slow down to talk to the Racer and then drive off again. This is illegal and unsafe.

Final Points

What you choose will depend on your situation and your budget. How certain do you want to be of communication? What kind of communication does your Racer want?

As with all of these systems, we highly recommend purchasing these before you arrive at the start. Radio Shack is a good place to find many of these or searching the internet for rentals. Many teams will be out looking for communication devices at the same time.