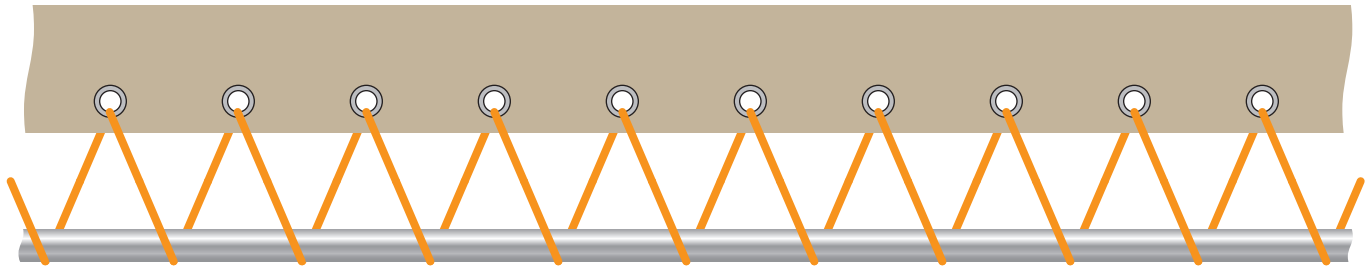


How To Tie Your Camp Up



And Make It Behave

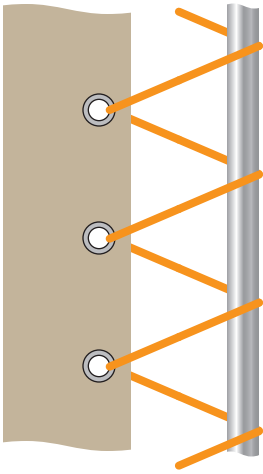
*We politely suggest you print this, laminate the important bits,
and post it someplace visible-like.*

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Running rigging: the basics



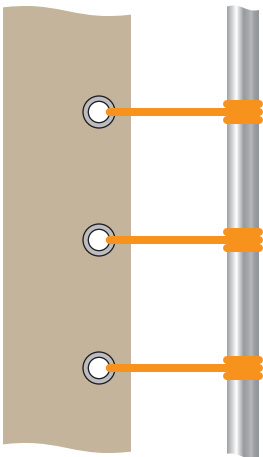
Good: running rigging

“Running rigging” is a term borrowed from sailing. This is how sails are lashed to a mast – nearly the same engineering challenge as securing tarps on the playa.

The rigging is all one line, looping through a grommet, then around the pole, then through another grommet, and so on. This allows tension to be distributed across the entire structure, and no one part of the line will ever bear the full load. It also allows a small amounts of shift throughout the whole system, which will not only absorb some shock but help keep things aligned appropriately.

Paracord is ideal for this application. It's cheap, very dynamic (i.e. stretches), and has a breaking strength of about 500 lbs. You can usually get this on spools from your local Army Surplus store.

Running rigging isn't as easy as bungee-based static rigging – you'll need to know a couple of basic knots.



Bad: static rigging

Static rigging is great for holding rigid structures together with non-stretching line under high tension. It's really lousy for tying off tarps where lots and lots of shocks from flutter will be hitting the system.

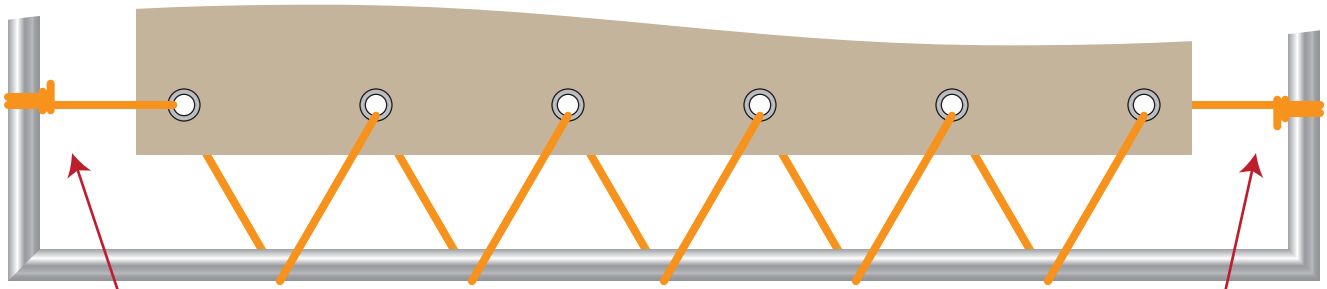
The main problem is that the shortest line in the system will take all the load. Flutter from wind will cause that line to deload, then take another shock load – over and over again. The line itself usually survives, but the grommet will tear out. Once the shortest line fails the load shifts to the next shortest, and so on.

A common work-around for this is to use shock cord, usually known as bungee cord. This works perfectly well in low wind: the load is distributed and the stretch in the line introduces some give.

But in high wind the shock cord will fully extend, negating the shock absorption. When this happens the shortest line will take the shock load, and over a period of hours this can shred a tarp.

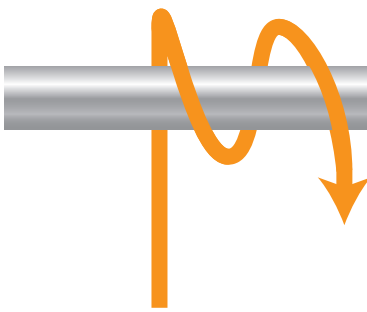


Running rigging: starting and stopping



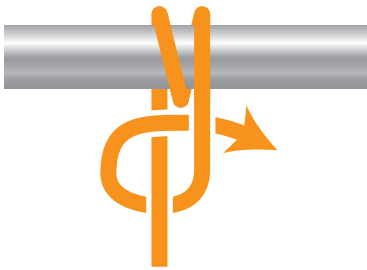
Start: round turn and two half hitches

Even if placed under a great deal of strain, this knot can still be untied fairly easily. The initial *round turn* takes any strain applied to the knot, and the two *half hitches* keep the knot securely in place.



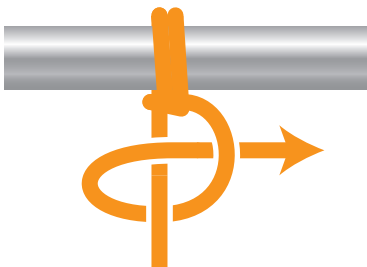
1. Round turn

Pass the rope twice around the bar, forming the round turn. Leaving enough line to complete the knot (about 4" - 6" for paracord), pull the round turn tight.



2. First half hitch

Pass the line around and behind the standing part. Tuck the line behind and through itself to form a half hitch, and pull taught.

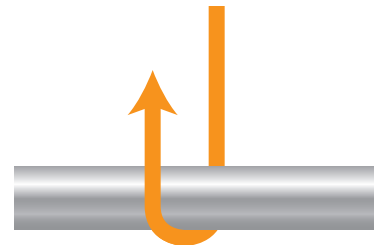


3. Second half hitch

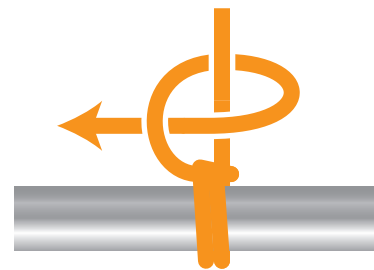
Pass the line behind and around the standing part, tucking it behind itself again. Pull taught to finish.

Finish: getting tension

The running rigging ends with the same knot: a round turn and two half hitches. To take up the slack and put tension on the line, pass the line once around the bar and pull taught. Keeping tension on the line, pass it around the bar a second time to form the *round turn*.



The round turn should hold the tension on the line while you complete the two half hitches.



Is taughter better?

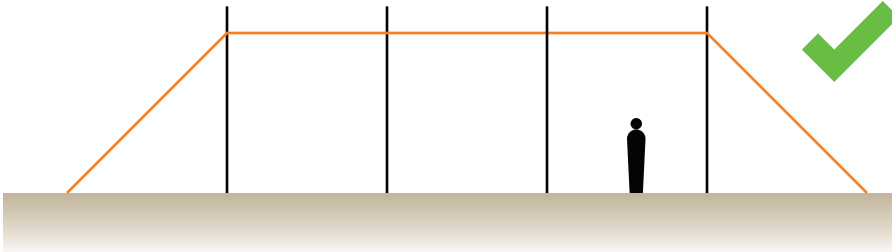
Not so taught that you are at the breaking strength of the line, but tension makes for happy running rigging. Tune up your rigging during the week to ensure solid tension.

Does it have to be paracord?

Stretchy rope is nice, but the important thing is the rigging. Even with highly "static" line a well tensioned running rigging will hold its own.

Static rigging

Structures that rely on guy lines and tension are generally built using static rigging. The hallmark of static rigging is using tension from multiple opposing directions to hold something rigidly in place: a flag pole, or a line of vertical support poles.



Good

This kind of rigging relies on very high tension to provide structural stability. You want really sturdy stakes, solid knots, and above all highly “static” (i.e. not at all stretchy) rope. Paracord or bungee is the wrong wrong thing for this.

We don’t lightly give commercial endorsements, but you just can’t go wrong with Amsteel for this kind of rigging. It’s as strong as wire rope; is much, much lighter; holds up to UV; cuts easily and doesn’t unravel or MOOP; and can be procured from your local marine supply store. For many playa construction projects you can use something as thin as 1/8” diameter rope.

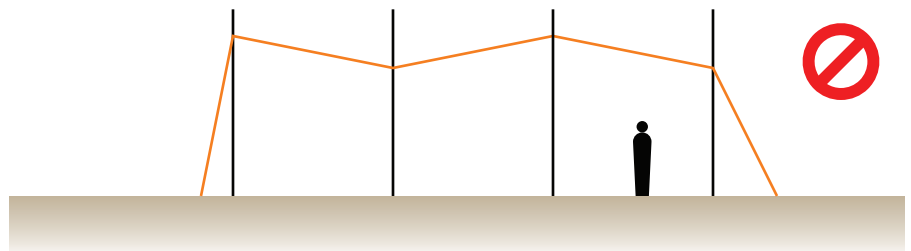
When guy-lining a solid structure, make certain that your guy lines create equal and opposing force. Always secure your guy lines far enough away from the structure the line forms no less than a 45° angle. (A good standard: if the guy line is attached 10’ off the ground, make certain it is anchored 10’ away from the structure.)

If you are using rope as the entire support mechanism (like in the diagram above), always keep the rope running in a straight line. Changes in direction will compromise tension, which will render the line useless.

Remember! Static rigging thrives on tension, so put as much on the line as you practically can. Vibration in the structure (from wind blowing on tarps, or people walking on the structure) is the enemy of tension, so keep a close watch on this and tune your rigging as necessary.

Bad

- Stretchy rope, like bungee or paracord
- Guy lines anchored too close to their structure
- Not using straight lines for structural rope
- Low tension



Recommendations

Practice. Don't learn this on the playa.

You're going to have to do this in a dust storm. At night. Drunk, probably, if we know you people at all.

So take the time to give it a shot in controlled circumstances. That way when you're on the playa and it really counts, you're not wondering how it's supposed to go again. This is especially true of how to build running rigging and get good solid tension on your tarp from all sides.

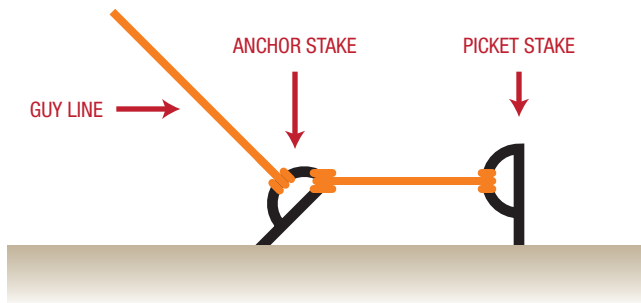
Don't tie stuff to static rigging

Static rigging dies a death of a thousand vibrations. Tying things to the rigging (e.g. curtains, signs, naked people) will put more variable strain on the line and loosen your structure and then the naked people will fall down and then the naked people won't play with you anymore and nobody wants that, now do they?

So don't tie stuff to your static rigging.

Picketing stakes more than doubles the strength.

If you have problems with guy line stakes pulling free of the playa, add a second stake behind it and connect it with some good strong non-stretchy rope. This is called a picket, and if you make the connecting line nice and taught you're in business.



FAQs

What if my structure is made of square wood, not smooth metal poles?

Rough edges and hard corners are not friendly to rope, especially if you are trying to pull rope around it under tension. Either attach hardware to the wood (e.g. eyebolts or pad eyes) or use a non-moving knot like a bowline to tie off.

Be mindful of rough rebar, which can easily abrade and cut through rope, especially paracord.

We're building a tensegrity structure. Does this advice still apply?

True tensegrity structures rely on particular points of give, other points of stasis. If you know enough to be building a tensegrity structure than you should stick with that and ignore this.

So the (guy or chick) who designed our stuff is, like, totally doing it wrong. Should I tell (him or her) why (she or he) is a(n) (idiot or moron)?

No. Head down. Mouth shut. Happy crew.

The rabbit comes out of the hole, and goes around the...?

Bedpost. The rabbit goes around the bedpost and back down the hole. Yeah.

Will you come fix my structural rigging?

Maybe. We'd certainly prefer to help you prevent damage than come over and clean up the tattered remains of a shade structure, so it's worth a shot. You can find us at 7:30 and Divorce this year.

And if you're really nice we'll tie you up and make you squeal with delight.

The (guy or chick) in the camp across the street is vexingly hot. Will you kindly teach (one of us) to tie (the other of us) up and make (us both) squeal with delight?

Fuck yes. Workshops Tuesday, Wednesday, and Friday at 1:00.

