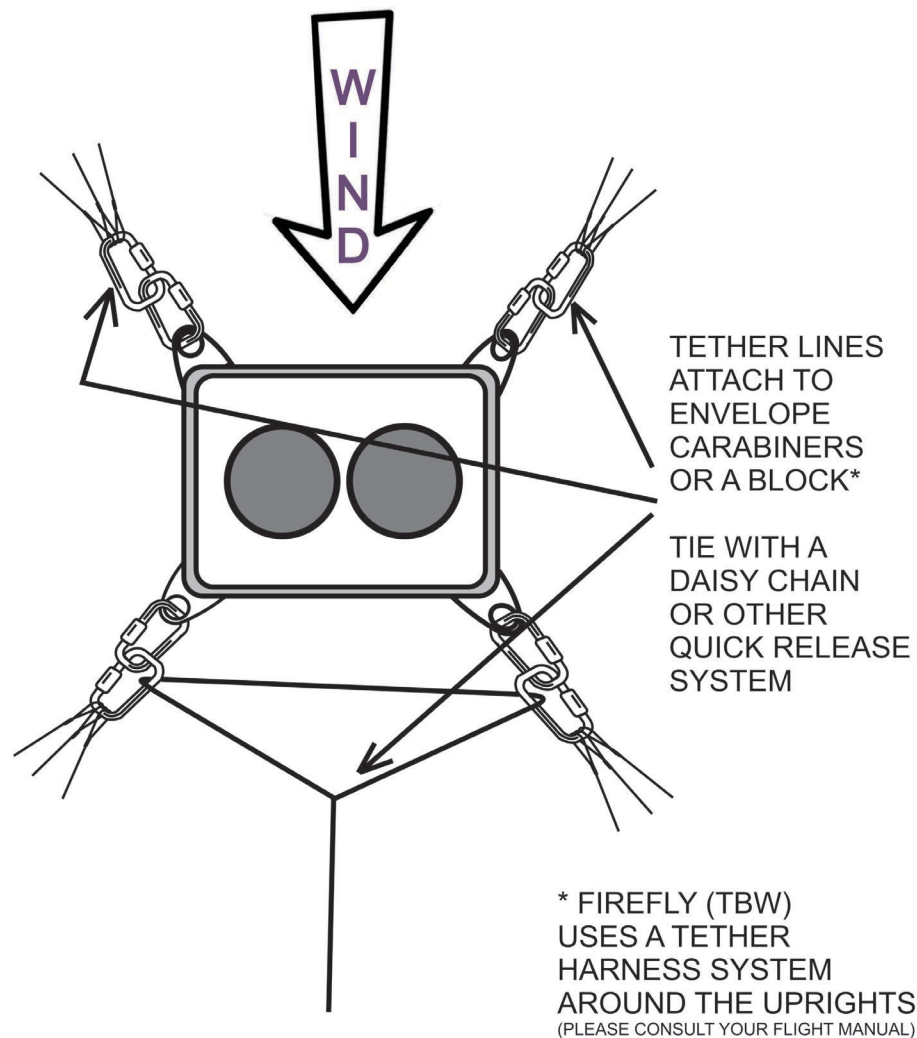


1. Tethers require a minimum of 150-200 ft x 150-200 ft to allow the balloon room to move in any direction should the wind change or increase. That's about 18 pickups parked end-to-end. There should not be anything the balloon can hit should you need to deflate quickly (in ANY direction). If necessary flag off the area with Caution Tape or the type of flagging you see around car dealerships, especially if you are tethering where cars may have access.
2. Set your basket in the middle of your tether area and run the lines out from there. Tethers require a minimum of 3 lines; 2 upwind and one downwind in the form of an equilateral triangle. All 3 should be tied off to something that will be immovable with 9,000 or more pounds of stress on it, such as a large tree. Since trees, etc. are not always available or placed properly, vehicles, typically pickups are the next best alternative. (The term vehicle does not include trailers.) Lines should be tied to a structural part of the vehicle, such as the frame or the enclosed "hooks" on the front end. They should be tied to the heaviest end of the vehicle (where the engine is) so the end of the vehicle won't be lifted off the ground. Never have crew hold the lines or tie to bumpers, etc. These are not sufficient should the wind increase or change. Remember, a fully inflated balloon can drag a pickup or motorhome sideways in a gust.
3. Tether lines are typically 9000 pound test or more, double-braided nylon or polyester rope, 150 feet long each for up to a 90K balloon. This is long enough for the balloon to go 20-30 feet up when fairly taunt before launch. Lines typically are fairly taunt before the balloon is inflated to ensure the system stays where you want it. The more slack in your lines, the higher off the ground the balloon can go, but also the larger the area in which the balloon can move. This makes it more likely that you will have to deflate over your tie-off points, e.g., your vehicle or a tree.
4. The balloon should be tied off where the envelope and basket meet. On all systems, this is the point which can handle the kind of stress that tethering puts on your system. Your flight manual may have details.
5. You will want to have **at least** one crew person per line. Crew is your main source of crowd control so extra crew is preferable.
6. Passengers waiting for rides should be kept clear of the lines. A waiting area should be established outside the radius of where the balloon can travel, e.g. outside the tie-off points, so that you don't need to worry about hurting passengers should gusts occur. Crew also need to escort passengers from behind the tie-off points to-and-from the basket. If it is necessary for passengers to pass where lines are, be sure to have a crew member lift the line up for them to pass UNDER, not over.

7. I don't think top tethers work well nor are they worth the trouble. This is my personal opinion. If you have a scoop, top tethers prevent the envelope from leaning and thus defeat the purpose of having a scoop. Instead the upwind side of the balloon caves in. (The tether systems allow for some leaning.) However, if using top tethers, always use bottom tethers, too, or a tether system that attaches to both places. Top tethers should be long enough that they do not stop the upward motion of the balloon. The bottom lines should stop the balloon to prevent damage to the system.

2019

## TETHER BASKET ATTACHMENT



# TETHER SET-UP

PASSENGERS  
STAY BEHIND  
ANCHOR POINTS

