

The HangLine

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The Long Hose Debate

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Every diver, regardless of the type of diving he is doing, should be carrying two second stages, a primary and an alternate.

The degree of complexity involved in the dive will determine how these second stages are configured. Your primary should be a high end high functioning regulator and very reliable. In addition to dependability, you want to make sure it is comfortable; this includes a good mouth piece. Simple design flaws (or features) can lead to jaw fatigue, equipment failure and other contributors to stress. Your alternate second stage does not necessarily require all the bells and whistles that your primary has, but it should be as reliable. Remember – this is life support equipment.

In extended range diving, compromising on any piece of your air delivery system can result in serious problems. Don't be complacent because 'it is only your back up'. Think of it this way; would you compromise on a back up parachute if you were a skydiver?

"I might hit the ground hard enough to break my legs but hey, it is only a back up parachute!"

~ Confessions of a Dead Skydiver

Be sure to secure all of your second stages (be they attached to your main cylinder, a stage bottle or a Rebreather) in such a way that they meet the following criteria;

- they are easily accessible to you (and other divers if need be)
- you can differentiate each of them by touch as well as by sight
- they are well secured and protected from silt and sand
- they cannot be confused with each other; properly mark oxygen regulators
- they are not going to free flow in a current
- purge buttons are guarded against impact with other equipment





Hogarthian Wrap		Coiled	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> quick deployment 	<ul style="list-style-type: none"> can become entangled on stages if not secured properly 	<ul style="list-style-type: none"> keeps hose clear of accessories and stages bottles secured on diver 	<ul style="list-style-type: none"> difficult to replace after use, need to wrap Hogarthian style
<ul style="list-style-type: none"> easily replaced 	<ul style="list-style-type: none"> some hoses tend to float up behind divers head 	<ul style="list-style-type: none"> keeps hoses clear from the back of a divers head/neck 	<ul style="list-style-type: none"> may cause kinks or bends in hose
<ul style="list-style-type: none"> low risk of snagging on other objects 	<ul style="list-style-type: none"> 5 foot hoses may not be long enough to wrap 	<ul style="list-style-type: none"> works well with 5 foot long hoses 	<ul style="list-style-type: none"> may snag if not coiled properly or snag on other objects when in tight restrictions
<ul style="list-style-type: none"> universally accepted method of storage 	<ul style="list-style-type: none"> when donated, all of the hose is deployed whether it is required or not – could pose entanglement issues 	<ul style="list-style-type: none"> need to dispense only enough hose as required by diver, the rest stays neatly out of the way 	<ul style="list-style-type: none"> may be difficult to access with shifting stage bottles

Which Hose Should I Breathe From?

Long Hose		Short Hose	
Advantages	Disadvantages	Advantages	Disadvantages
<ul style="list-style-type: none"> keeps both regulators close to your mouth in the event you need to switch regs (i.e. assuming your short hose is attached to a neck lanyard) 	<ul style="list-style-type: none"> as a rescuer in an out-of-air situation, you are giving up a regulator you know works 	<ul style="list-style-type: none"> you never give up your air supply 	<ul style="list-style-type: none"> need to secure the long hose second stage as it is not used
<ul style="list-style-type: none"> can quickly donate a regulator that you know works to a stressed diver 	<ul style="list-style-type: none"> some long hoses tend to float up behind the diver's head 	<ul style="list-style-type: none"> easier if your long hose is too short to wrap around and breathe from (i.e. using a 5 foot) 	<ul style="list-style-type: none"> breathing off of a regulator with a neck lanyard can be uncomfortable
<ul style="list-style-type: none"> out-of-air diver always knows where it can be found 	<ul style="list-style-type: none"> having a regulator ripped unexpectedly from your mouth by an out-of-air diver can cause problems 	<ul style="list-style-type: none"> keeps long hose secured and prevents it from working loose as you move your head around 	<ul style="list-style-type: none"> out-of-air divers may not be able to locate your alternate (long hose) as easily





Many divers will cover the mouth pieces of any regulator that could possibly contain hyperoxic mixes preventing accidental deployment at depth in stressful situations. A second stage shut off valve (usually installed between the LP hose and the second stage regulator) is a nifty little device that prevents any kind of gas leak while the regulator is not in use. The type of diving you are doing will ultimately determine the system you are running, and subsequently how you will configure your breathing regulators.

The Long Hose

Most extended range diving configurations will incorporate an LP long hose; however it can be a great asset in all levels of diving. The long hose allows a diver to comfortably donate a back up regulator to an out of air diver. In stressful situations, where two divers are dealing with a problem, the last thing you need is to be seriously limited by the amount of room you have to work with because the hose connecting the two of you is very short. It is tough to calm an out-of-air diver when you are so close that you are kicking each other in the shins. All alternate second stages are attached to a longer hose (usually longer than the primary system by 6 inches or so) but for a backup system to be really effective, it should be at least 5 feet long. For entry level diving, this is an ideal length; anything more may be overkill. The 5-foot hose is also suitable for extended range dives that do not require divers sharing air to pass through restrictions. For cave diving or serious wreck penetration dives, where divers breathing off the same configuration may need to pass through tight restrictions,

or are in environments where space is limited, a 7 foot long hose is highly recommended.

There are many ways to configure or store a long hose. Some divers wrap the hose around their bodies; this is sometimes referred to as a Hogarthian Wrap after American caver William Hogarth Main. The system was designed to allow the quick donation of a regulator to a diver out of air in a cave. Others store it neatly coiled and secured to their person, harness or neck lanyard, or to their tanks. Whatever system you choose, be sure that both you and other divers can easily access it. Both of these methods of storing your long hose can be configured in such a way that the diver can breathe off it. Despite the arguments you always hear about which method a person should use to store a long hose, we have always maintained that it is a personal decision that ultimately will be decided by the type of diving a diver does. Both methods have advantages and disadvantages.

Similarly, some argue that the diver should always breathe off of the long hose. It is highly recommended that you suspend the second stage attached to a short hose from a neck lanyard around your neck. This is a regulator that is used by ONLY you, as you should always have a second stage secured (permanently) close to your mouth. Your number one priority is self-rescue. Hint: size your lanyard so that it is short enough that you can actually bend your neck forward and grab the regulator with your mouth. Whether you choose to breathe from this regulator or not is your choice. If you are breathing from your long





hose, assisting an out-of-air diver will require that you donate the regulator you are breathing from and replace it with the regulator on your lanyard. If you are already breathing from your short hose, all you need to do is locate the long hose and hand it over; no need to give up your air supply (the one you know works). Of course a good pre-dive safety drill should confirm all of your equipment works but there are always 'ifs'. There are a number of arguments both for and against breathing off of the long hose.

If you always breathe from your long hose, then you should be comfortable with all of the procedures involved in donating it. That way everyone you dive with is also familiar with your configuration and the correct protocols for securing an alternate air source should they require it. You will then enjoy the luxury of being able to switch back and forth from one regulator to another without any effort as both are always in front of your mouth. Be consistent regardless of the type of diving you are doing, and all approaches (with the exception of Rebreathers) work well with this system.

~Safe Diving

