The Hogarthian Gear Configuration

by Jarrod Jablonski

Cave diving has undergone some significant changes during the last roughly 50 years of its evolution, yet few aspects of the sport remain more hotly contested than gear configuration. Dozens of styles have been marched out to center stage and purported to be the most effective, the safest, the easiest, the cheapest, or lately, even the most "technical". Some people have casually recommended one style over another, others have adamantly insisted upon their configuration, while still others advocate that one just do what feels good. How can one sport support such a variety of opinions and, perhaps more importantly, how is a diver to dim the clamor of opinions in order to make a sound and reasonable decision?

The most sensible way to make any educated decision is to gather information and evaluate which of the available options best satisfies your particular needs. Nearly all styles of gear configuration allow the average diver to access a cave. Even many an open water diver has returned unscathed from a poorly chosen venture into the depths of our cave systems, yet despite their safe return, consensus opinion holds that a certain minimum of equipment is necessary to safely penetrate into the overhead environment. It is how one should configure that equipment and what equipment to use that garnishes the lion's share of the sometimes bitter debate over equipment configuration.

Different Styles

The vast majority of equipment styles are most easily discussed in relation to one's placement of the long hose. Many different styles of equipment configuration exist and the proponents of each variation differ in their specific solution to the many details of equipment placement. The following two styles are the most popular divisions of hose placement. While many differences may exist within each group, the separation of the two primary groups largely pertains to one's belief as to whether the regulator donated to an out of air diver should come from one's mouth or from one's retaining device.

The Bungie Style - donating from one's retaining device

The most common style places the long hose in some type of surgical tubing or restrictive band. This band may be placed on the side of the tanks, near the manifold, on the back plate or nearly anywhere that suits one's fancy. Proponents of this style vary in their dedication to the refinement of their equipment placement, with many divers generally lacking a focus on reduction and cleanliness. However, a few divers practicing this style do begin to approach the Minimalism concept so obvious in the Hogarthian style.

The Hogarthian Style - donating your own regulator

The Hogarthian Style has many minor variations, yet its focus asserts a policy of minimalism. In other words, if it is not needed, it is a potential liability. The Hogarthian style strives to eliminate the unnecessary while configuring the necessary in the most streamlined manner possible. Named for it's founding father, William Hogarth Main, the Hogarthian style is constantly being improved and refined. Bill Main himself, despite nearly 25 years of cave diving, is invariably showing up at local dive sites with modifications and much can be learned from his dedication.

Despite the minor variations that exist within the Hogarthian diving community, one will find the strictest of its practitioners to be remarkably similar in their configuration. Perhaps the most extreme group of Hogarthian divers remains the Woodville Karst Plain Divers (WKPP), a group that has received considerable press (good and bad) for their dedication to the Hogarthian style. While the trademark of a Hogarthian diver is that they breathe the long hose and donate this hose to an out of air diver the style is really about much more. Regardless of an individual's preference for which hose to donate, much can be learned from the adherence to minimalism so central to the Hogarthian configuration.

Many divers appreciate that certain extraordinary dives may require a degree of refinement simply unnecessary for the average diver. Yet in much the same way space travel is merely a distant dream for the majority, the advances gained from this pursuit are abundant. How much of this refinement is reasonable or more importantly helpful? One's attention to detail should at least be proportional to the type of dives done, but that strict attention to detail couldn't hurt. If all your dives focus on the main line and your penetrations are modest, perhaps your idea of strict attention would be different. If your dives begin to incorporate stage diving and longer penetrations then undoubtedly you should exercise a complimentary form of attention. In general, always be aware that you should look at the entire package as it functions together. Your equipment should be a cohesive unit that facilitates your dives and not a haphazard collection of available items.

Breathing The Long Hose

Despite its growing popularity, many divers remain opposed to donating the regulator from their mouth. The following discussion reviews the most common resistance to donating the long hose from the mouth.

1) The last thing I want to do in an out of air situation is give up my primary regulator.

- This does not really seem to be a rational fear. It is likely that a diver incapable of removing the regulator from his or her mouth for five to ten seconds is not skilled or practiced enough to be in an overhead environment. One may question this divers ability to handle an out of air situaion in which the out of air diver chooses the regulator in their mouth. A diver with this degree of concern over the regulator in their mouth may find it quite a challenge to even deal with the very real possibility of an accidentally dislodged regulator.

By donating the long hose regulator from the mouth in an out of air situation one guarantees that the person most in need of a clean fully functioning regulator is going to get it. If you pass any other regulator to an out of air diver it is quite possible that the regulator received may contain contaminants that will be impossible for the stressed diver to manage. In essence, what you will have done is to place the last straw on the camel's back, creating the last problem your dive buddy can manage. The advantage of donating your long hose primary is that you are always ready for this very real possibility. You are, in essence, always prepared for any eventuality rather than maintaining a fixed picture of how things should operate. Emergencies have an annoying habit of not going as planned and the Hogarthian diver is more prepared to manage a variety of out of air scenarios.

2) I don't want to breath my long hose, I want to have the best performance regulator in my mouth and the long hose decreases performance.

- With literally thousands of deep exploration dives accomplished by divers breathing the long hose, the performance argument seems rather a moot point. Yet, if one were to insist that the reduction of performance is unmanageable, it seems like a poor solution to leave the stressed, out of air diver gasping for air on this lower performance regulator so you can have a more relaxed dive. Your best performance regulator must be on your long hose and if its performance is unacceptable in a relaxed situation then it is certainly inappropriate to suggest that your stressed dive buddy is better prepared for this increased resistance. The one thing to be clear on is that if the regulator you try to provide to an out of air diver is in *any* way substandard, you will be giving up the regulator in you mouth and your ability to handle that situation may make all the difference.

3) I just don't want to deal with that hose around my neck.

- Any skill worth learning usually takes refinement. The long hose may at times seem uncomfortable to some people, but regardless of your storage location, you have to deal with that hose. When you tuck a long hose into some surgical tubing you feel that it is forgotten and indeed for some it is, but what happens when it pulls free or is not set just right? If you rely on your buddy to arrange this hose for you, what guarantee do you have that it is to your liking? In a sport that preaches self-sufficiency, does it not seem illogical to configure you equipment in a way that forces your dependance on a dive buddy?

4) You can't stage dive and breathe the longhose.

- I would never have imagined that people thought this to be true, yet exposure to cave instructors whose abilities I otherwise respect has proven me wrong. Stage diving Hogarthian style is in no way more difficult than for any other style. In fact, the majority of cave exploration currently being conducted is by divers breathing the long hose, despite the fact that they are a minority in the cave community.

The System Approach

No review of the Hogarthian style is complete without a discussion of the system itself. It is not merely the streamlined nature of their equipment nor the use of the long hose that sets the Hogarthian diver apart, it is the way new pieces are carefully arranged to create a harmonious system. Your equipment must function cohesively and be configured so as to provide you with the greatest support - it is after all life support equipment. For example, let's assume that you have made the commitment to breathing the long hose. That decision, in and of itself must not be the end to your deliberation. In fact, it is really only the beginning. Where and how you store the balance of this length of hose and indeed how long it is are at least as crucial as your decision to use it as a primary. Most divers following this style have opted for the 7' length (nine is ridiculous and dangerous in most situations and 5' is precariously short in restrictive passages) and then run it under a hip mounted light canister across the chest and one half a loop around the neck into the mouth. This system is ideal in that it allows nearly five feet of hose to instantly be available and the remaining two to be deployed with a quick flick of the hand.

Do not try and wrap this hose around your neck multiple times (this may be quite dangerous) as its deployment will be time consuming and awkward. But why a hip mounted canister? This hip mounted canister allows for easy removal in the event of entanglement, visual verification (I prefer clear housings) to assure it is not a water cooled version, a shorter cord to deal with, and assurance of general stability. IN addition, the lack of a light swinging from the bottom of your tanks provides ample room to store reels and extra scooters and even provides an ideal place to tow a stranded diver during an aborted scooter dive. The hip mounted version is much easier to remove and replace and it reduces the number of times you set your 100+ pound tanks on top of it. Regardless of your chosen system, here are some general issues you need to consider.

Reduce, Reduce, and Reduce

Too many divers today seem under the impression that more is always better. In cave diving what isneeded is better; what is not needed is a detriment. Equipment choice like most things is a cost vs. benefit analysis in which one must weigh the potential risk against the perceived benefit. The dificult part and in fact the thing that really defines a safe and effective diver is their ability to accurately evaluate the benefit while candidly weighing the acceptable risk.

- Lights are an essnetial portion of your equipment yet more is again not always better. One primary and two backup lights should be fine for most situations. Unless you intentionally dive faulty equipment or ignore common maintenance the likelihood of a triple light failure is statistically insignificant. Yet if you carry six lights you are likely to encounter many other unnecessary problems. Not only are you less likely to care for thoselights but they will cause you numberous entanglement hazards that will far outweigh the perceived benefit. Three good lights - one strong dependable primary with two small back-up lights is more than sufficient for most dives. If light failures are common on your dives you should reevaluate your equipment and/or your technique.

I have disucssed the placement of the primary light canister and the advantages ofhip mounted operation but how about one's reserve lights. These lights could be stored in several places and many people find on the tank to be favorable. This system can appear fairly clean depending on the users dedication, but the lights may pull free in smaller caves and tangle in the line. When placed on one's harness below the arms they tuck neatly out of the way and are essentially snag free.

The primary light is an integral part of any divers equipment. Your light must provide ample illumination, be reliable, and allow flexible ues. The test tube style light satisfies all these requirements and more. The light beam has excellent illumination properties, is simple to operate, has tremendous flexibility and when connected to a canister style light will provide stalwart reliability. The Goodman style that rests atop your hand allows for further flexibility as it provides the unencumbered use of both hands. A Goodman style handle allows just as much flexibility as the helmet mounted light yet does not blind your dive buddies and allows the diver to be more aware of their surroundings as the light is easily directed around the cave.

- Cages tend to be somewhat controversial topics. First, let me say that I dislike cages. I am not against the thing they purport to accomplish but I am against their apparent success. First let us look at your propensity for contacting the ceiling. If you hit the ceiling on a regular basis and conclude that a cage is the correct solution I would argue your logic is flawed or at least questionable. If you hit the ceiling a lot don't look for substitutions to becoming a better cave diver, just work on your technique. Ok, so everyone hits the ceiling on occasion but how hard? If you are swimming I think you are being a bit reactionary and should really reconsider you risk.

If you are scootering then you have a somewhat legitimate concern. You may choose one of the large dome style cages that appear to be solid protection but also have an annoying habit of wedging their owner in small places. Give the likelihood of a manifold failure I would much rather go cageless and remain flexible in smaller areas. If you use the smaller more streamlined version of the cage which substitutes curved metal guards above your regulators then I think you are fooling yourself. I have witnessed two people break their din regulators off at the manifold despite the presence of these protective devices. If, in fact, these devices are limited in their ability to accomplish what they were designed for than their large line catching profile is far more a risk than a benefit.

- Manifolds are, in general, the best method to manage your air supply. The only exceptions are in my opinion solo diving and side mount. If you are not pursuing either of these options then you should not configure as if you are. I caution you to be wary both about using independent valves and about diving with those that dive independent. It requires great care and superior gas management capabilities to effectively monitor independent cylinders and experience has shown that most people are not capable of proper management. Given the likelihood of a manifold failure I will remain an ardent supporter of manifolds for nearly all diving environments.

- Isolators are nifty little inventions that responded to our desire for the cake after it was eaten. They are in theory excellent ideas and in practice probably fairly decent. As long as one maintains an awareness of their strengths and weaknesses they may remain effective pieces of equiiment. They are, however, not necessarily the saving grace everyone has you believe. First, while they may provide a redundant option to isolate your cylinders, they are also another valve and just as likely to fail as the one you are circumventing. Be aware that due to the nature of their construction failure of your isolator will only allow one cylinder to be isolated thes protecting only a finite amount of your available gas. Furthermore, one must always guard against the common occurances of valves that are inadvertently turned off during filling or safety drills.

- Knobs on your valves should consume at least some of your thought process. Rubber knobs are my personal favorite. They are durable, shock absorbent, shatter proof, and easy to turn. Their only downfall is that if you have a manifold that has one post shut down upon contact with the ceiling then you must be concerned with the ease with which these valves turn. Personally, were I diving a manifold where this was a problem I would probably still use rubber knobs and just be more cautions. Plastic knobs are dangerous because they can shatter, leaving you with nothing to turn on or off. The metal knobs attempt to solve this and the auto shut off problem yet fall a little short because they can bend upon impact and be rendered useless.

- Tanks come in a variety of flavors and I will spend very little time on them. My preference is for the larger volume lower pressure steel cylinders. Tank size should depend on your size, your needs and your available funds. Do the cave and yourself a favor and really evaluate your needs. Don't buy the most expensive tanks your wallet can handle. 95's seem to be the best overall buy but you should evaluate your needs.

- Gauges are necessary pieces of equipment but people often succumb to the more is better philosophy. Two timing devices should be more than sufficient for any body'sneeds. The gauges should be wrist mounted so as to avoid bulky consoles and the resulting dredging effect they create. One's pressure gauge should be free from a bulky console and mounted in a clean area. A pressure gauge that is clipped to one's belt keeps the chest free from clutter and limits the items you will potentially drag in the mud. The advent of hoseless gauges promises to solve all these problems yet like most cure-alls I remain patiently optimistic but as yet remain unwilling to bestow all my air management faith in their reliability.

- The body is the central component to any effective diving locker and no discussion of equipment would be complete without giving it a mention. Many debates have revolved around the necessity of fitness in diving and no doubt these debates will continue for years to come. It seems that the most reasonable course would gbe to evaluate the type of diving to be done and adjust your level of fitness accordingly. The average diving should be seeking good cardiovascular fitness with aerobic activity - at least three days a week for a minimum of 20 minutes. However, good fitness can serve you in life as well as diving and a thorough fitness routine will leave you more prepared for the rigors diving can produce.

A person winded by a flight of stairs can certainly dive but their ability to manage stressful, air critical situations is limited by their physical response to elevated exertion. This may seem inconsequential in a leisurely dive but in an emergency it can make all the difference. Certainly excessive exercise could be a potential liability as scar tissue accumulation at the joints could reduce circulation. However, too much exercise is indeed a rare commodity.

Conclusion

The next decade of diving will undoubtedly be full of excitement and prodigious change. Undoubtedly equipment advancements will continue and many exciting advancements are bound to grace the diving world. Yet, regardless of the level of changed beyond the year 2000, two things will undoubtedly remain constant. There will always be new equipment for people to obsess over and there will always be people arguing over how that equipment should be configured.

The preceding discussion attempted to shed light upon some of the basic tenants within the Hogarthian equipment configuration. As pertains to equipment more is rarely better and the Hogarthian diver grudgingly makes additions to this minimalist attire. One should not take from this discussion the impression that safety equipment is dispensable and that the Hogarthian diver intentionally accepts additional risk. Quite the contrary, the Hogarthian diver attempts to remove all possible risks by designing a holistic life support system that facilitates every dive. The risk should after all be a function of the environment and not the divers state of preparedness.

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