



# TIGERGEAR'S INTEGRATED Rapid Attachment Mounting System

By Jeff Back

Whether gearing up for a search and recovery mission while rushing to a cold water accident scene or assembling gear on a crowded deck of a dive boat in choppy seas, divers have a common goal: to get in the water as quickly and as safely as possible. It's when the conditions are toughest that having a foolproof way of assembling gear is appreciated the most.

**A**wreck dive in the St. Lawrence River between New York State and the Canadian border drove home the need for a better system. Frustration built among divers trying to keep their balance on the rolling boat. One diver's jaw dropped as his tank mounting hardware rolled into the water after he had spent several minutes trying to change a single-tank setup over for double tanks. Another diver, struggling to mount a pony bottle, complained it was hard to secure gear

with everything else in the way. Amid the cacophony of complaints about bolts, bottles and buoyancy compensators came the idea of making a secure, simple-to-use bracketing system that would solve many of these problems.

As divers' skills advance so do their gear needs, leading to complications found on the St. Lawrence trip. Many divers find that equipment attachment can be just as adventurous and challenging as the dive itself. Time constraints,



IMAGES: TIGERGEAR



especially under urgent public-safety conditions, can make configuring gear challenging at best, and add unnecessary delay, frustration and risk. Wrestling with heavy bulky gear occurs at the most inopportune moment, just before entering the water, when additional distractions provide opportunity for error.

To reduce the frustration of last-minute assembly, TigerGear developed the Integrated Rapid Attachment Mounting System. IRAMS allows divers to prepare their gear for the assembly when conditions are relaxed, by taking a modular approach to gear. There's the BCD or harness, the tanks, and the secondary packages such as pony bottles and battery packs. Handling any of these three modules individually is easily manageable. IRAMS provides a way to quickly assemble these "equipment modules" with secure and consistent attachments in seconds using a simple glide-and-lock system. Gear components can be interchanged on the spot, providing flexibility for individual preferences and techniques.

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The IRAMS has a two-section bracket assembly — the BCD mount and the slave section. Mating the sections is accomplished by simply interlocking them with a vertical movement. When the slave section bottoms, the assembly holds itself in place while the locking pins are installed. Detachment is equally simple. Pull the locking pins, lift the slave side of the assembly, and the unit separates. The unique design confines forces to within the bracket assembly and not to the locking pins. This allows the pins to be removed at any time, even underwater, for handing off a fresh pony bottle to a snagged public-safety diver, for instance.

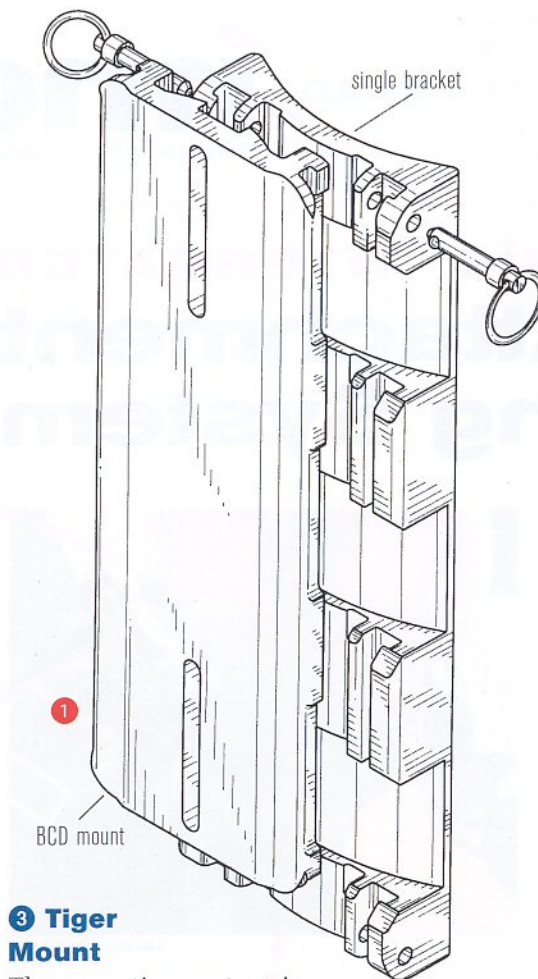
The backbone of this system is the mating of the harness with the cylinder. The BCD Mount is the receiver that provides the mounting rails to securely hold tank mount to the BCD or harness. Two carriage bolts pass through two elongated slots in the BCD Mount and align with the grommet holes in the BCD. The mount, available for either single- or double-tank configurations, can be kept permanently mounted to the BCD or harness so there is no need for installation at critical times before dives.

### 1 Single Bracket

The Single Bracket connects a single tank to the BCD Mount. It attaches to the cylinder using either two stainless steel bands or 2-inch nylon cinch straps. An additional groove is incorporated for attaching accessory items, such as pony bottles or battery packs, using conventional nylon straps. The gap between the tank and the BCD is minimal yet allows ample room to access the release pins with gloved hands.

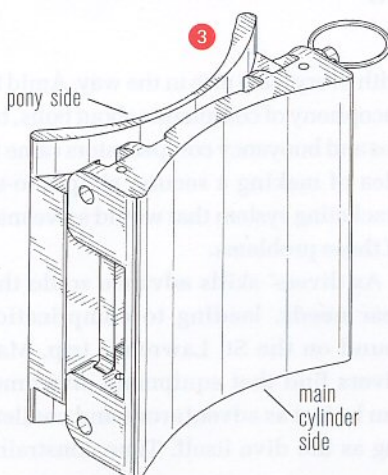
### 2 Double Bracket

The Double Bracket connects to a set of manifolded tanks utilizing double bands. Proper spacing of the bands allows alignment with the holes through the double bracket. Stainless hardware passes through the bracket and bands allowing them to be tightened as a unit one time during setup. The Double Bracket then attaches to the BCD Mount using TigerGear's patented interlocking system.



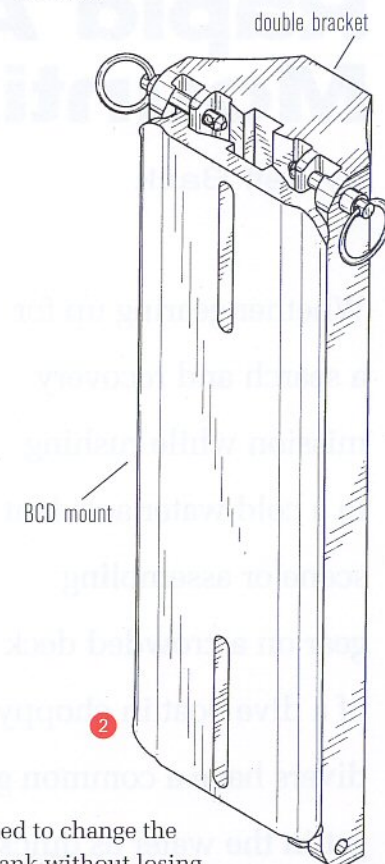
### 3 Tiger Mount

The mounting system is also available in a stand-alone unit called the TigerMount. It can be attached to a main tank with metal bands or a conventional BCD tank strap for quick and easy attachment and detachment of accessory items such as pony bottles and battery canisters for lights. All corners on the bracket are chamfered, so BCD straps can slide easily over the fixture without snagging. Stainless rods within the main cylinder attachment allow the BCD tank strap to be threaded through the TigerMount, allowing the BCD strap to be



Line drawings show the mounting systems for single- and double-tank setups and the stand-alone TigerMount system for attaching pony bottles and other accessories to a tank.

ILLUSTRATIONS:  
TIGERGEAR



loosened to change the main tank without losing alignment of your attachments.

All IRAMS components are machined to close tolerances from extruded aircraft-grade aluminum alloy, combining strength, durability and a means to manufacture the unique shapes necessary for secure attachments. After machining, the brackets are finished with a process called hardcoating rather than the standard anodizing process. This provides maximum protection from saltwater, helps reduce wear from rigorous use and extends component life. By easing our minds and our entries into the water, TigerGear's IRAMS can revolutionize the way divers think about gearing up. ■

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