Left: The Phoenix 10's controls are magnetic and don't penetrate the housing. Below: The backplate is secured by four stainless steel clamps.

A Simple, Reliable and Rugged Electronic Video Housing

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PHOENIX 10

A new type of underwater video housing, called the Phoenix 10, has surfaced from Rankin Industries. It is designed to fit the Sony TR or FX camcorder. After 10 years of research and development, this newly formed company decided it could make a simple, reliable yet rugged electronic video housing that could be reasonably priced.

Marcus Rankin, the inventor and avid videographer, wanted to make sure those who bought his housings would have less worry about taking underwater videos. With the Phoenix 10 you won't have to ask yourself:

Will my camera stay dry?
Can I see what I am shooting?
Did I connect the wires correctly?
Will someone on the boat break it?
Will I know which button does what?

This high impact PVC plastic housing was designed and manufactured using a sophisticated computer design program. The housing has 5/8 inch thick walls and is depth rated to 200 feet. Its controls and handles are also made of corrosion resistant molded plastic. Only the screws and clamps are made of stainless steel. Everything at Rankin Industries is done under the same roof, so it can control quality and make minor changes to the molds easily.

The Phoenix 10 has several innovative concepts not found in most video housings today. We first noticed the housing has no control glands. All three video camera controls are magnetically controlled on the sides of the Phoenix 10 housing. Each control has a small magnet on the back side and, when aligned with a magnetic sensor in the housing, activates that specific function. No through-hull penetrations are made for these controls, so there is no chance of water leakage at these points. The right control is for the record/stop function, while the two on the left control focus and zoom.

The watertight question boils down to the back of the housing, where there is a special backplate. Instead of using a large O-ring, Rankin went back to an old concept developed with the first underwater housings. The seal is based on a gasket design but is in the shape of an O-ring. Instead of using a single gasket, Rankin molded three O-ring shaped gaskets into the backplate to ensure a perfect seal. This eliminates the chance of loosing an O-ring. According to the instructions that come with the housing, you do not even have to lubricate the gasket, as it may collect

The magnetic switches on the left side of the housing control focus and zoom.

debris on the gasket seal itself. The backplate is held in place with four stainless steel clamps.

The backplate also contains a special 4x magnifier for those cameras that allow you to remove the eyepiece. With the camera eyepiece removed and the magnifier in place, you will be able to see a large, full screen preview image. If your camera eyepiece is not removable the magnifier can be easily moved to the side.

An optional backplate is also available for those videographers who use color viewers. This enlarged backplate attaches in the same manner but offers a much larger viewing area.

Since dive travel to exotic locations has become more popular, video cameras and housings have had to become more compact. With more baggage weight restrictions on airlines, every pound counts. Ballast does not come with the Phoenix 10 housing. Instead, a special rubber boot at the base of the housing is designed to take one, two or three pound lead diving weights. When you get to your destination, you merely ask for a few more pounds of weight than normal and return it at the trip's inevitable end.

To attach your camera, remove the tray by sliding it back toward you. Ensure your camera has a fully charged battery and a new video cassette, set the camera to Full Auto and then attach it with one large bolt on the underside of the docking tray. The camera is held in place with small rubber bumps attached to the tray.

A short cord leads from the back of the tray and plugs into the remote jack of the camera. The end of this cord attaches to a 9-pin connector on the bottom of the tray. As the docking tray slides into the housing it slides under two screws in the front of the housing. At the same time the male 9-pin connector mates with a connector in the back of the housing. This serves as both the camera's electrical control and a way to lock the camera into the housing to prevent movement during the dive. Before closing the housing, test all the camera controls and attach the backplate, locking the two opposite latches simultaneously. Conduct a final test of the controls and you are ready to make a dive.

With most video housings today, you must decide before each dive if you are

SPECIFICATIONS OF THE PHOENIX 10 VIDEO HOUSING

Construction:	Molded PVC plastic
Weight:	9 pounds
Length:	Approx. 12 inches
Diameter:	Approx. 7 inches
Controls:	Record/stop, zoom, manual focus
Depth:	200 feet
Backplate seal:	Triple gasket
Ports:	Macro, wide angle, super wide angle
Optional ports:	Hydrophone, video out, light sync, power in
Viewfinder:	Internal 4x magnifier

Phoenix 10: (with wide angle port and standard back) $995

OPTIONAL EQUIPMENT

Color backplate:	$200
Color correction filter:	$99
Fluorescent light:	$199
Twin halogen lights:	$799

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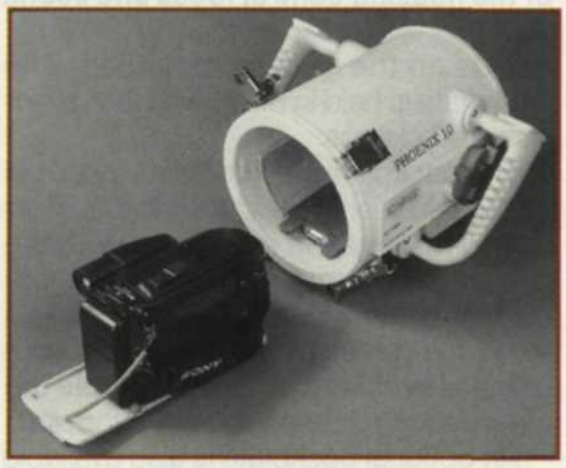
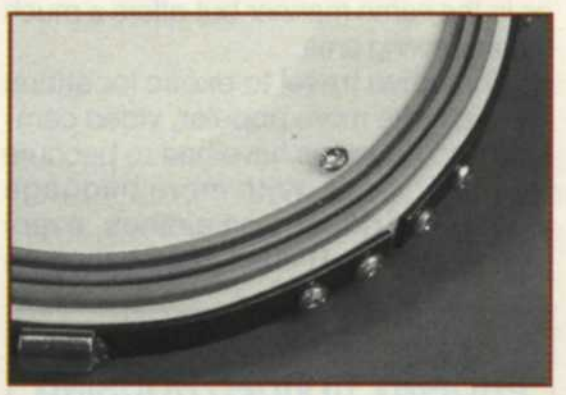
going to use a correction filter. The problem arises when you find great subjects at both 60 feet and 10 feet. If you don't use a filter, the subject at 10 feet is good but the images at 60 feet are very blue. If you did use the filter, the images at 60 feet would be great but the images taken at 10 feet would be red. With the Phoenix 10, the filter attaches to the



The Sony camcorder is attached to a docking tray and secured in the housing.



The backplate of the Phoenix 10 housing is sealed with three O-ring shaped gaskets.

front of the housing itself. It can be removed underwater, so you can shoot with or without it. This special external filter has a unique mounting system and must be purchased from Rankin Industries.

If you prefer to manually focus your camera, you can set it to manual focus before you load it into the housing. Then set the control on the left side to focus mode and manual focus is then accomplished with the zoom control.

Three ports are available for the Phoenix 10 video housing. The standard port that comes with the housing is a wide angle port and is used for general photography. A special flat port is available for macro that makes subjects appear bigger. If you dive in dirty water, a special super wide port is available. With this port you can achieve greater clarity.

Four optional electronic ports are available for connection at the base of the housing. These ports allow electrical connections between the camera and

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TECHNIFACTS

minum cylinders and only under special circumstances for steel tanks.

The important message you should get from this Technifacts is that you must take care of your dive tanks. They must be used, inspected and carefully maintained if they are to serve you safely for the rest of your life.

Be with us next month for information on how to get the best and the most out of your dive tanks. It could save a life—yours.

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hydrophone, video out, lights or external power. If you decide to add one of these ports after you purchase the Phoenix 10, you can send it back to the factory and have it retrofit to accommodate the accessory.

Rankin Industries also offers two types of video lights for the Phoenix 10 housing. If you want an inexpensive lighting system with disposable batteries, a single fluorescent light is available. For more professional lighting, a twin set of halogen lights with rechargeable batteries can be purchased as optional equipment. With the halogen lighting system, an electrical connection to the housing can either be made at the time of purchase or retrofitted later. A unique feature of these lighting systems is the ability to conserve power. When the camera is in standby, the lights turn off. When record is started, the lights come on.

It is obvious by looking at the Phoenix 10 that much thought, testing and concern for the videographer's needs took place before the final mold was cast. There are no loose wires hanging around, no O-rings to grease and no extra hole penetrations. It comes with a built-in wide angle lens and its heavy duty, light weight plastic helps avoid saltwater corrosion. All this and a price tag of $995. So, what are you waiting for? Call sales manager Dan Turner at Rankin Industries at (800) 297-9111 for more information.

SHARKS YOU SHOULD KNOW

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Mackerel off the boat so he and Bill Gleason jumped in. Thinking he might photograph the Mackerel, Al put a 50mm lens on his camera.

The divers were drifting about 25 to 30 feet under the boat when the huge