

Aqua-Vu®



Underwater Viewing System Owners Manual

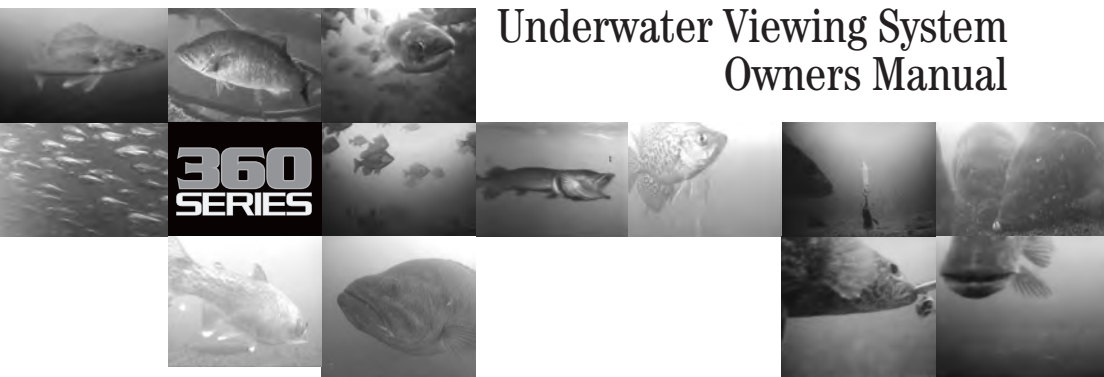


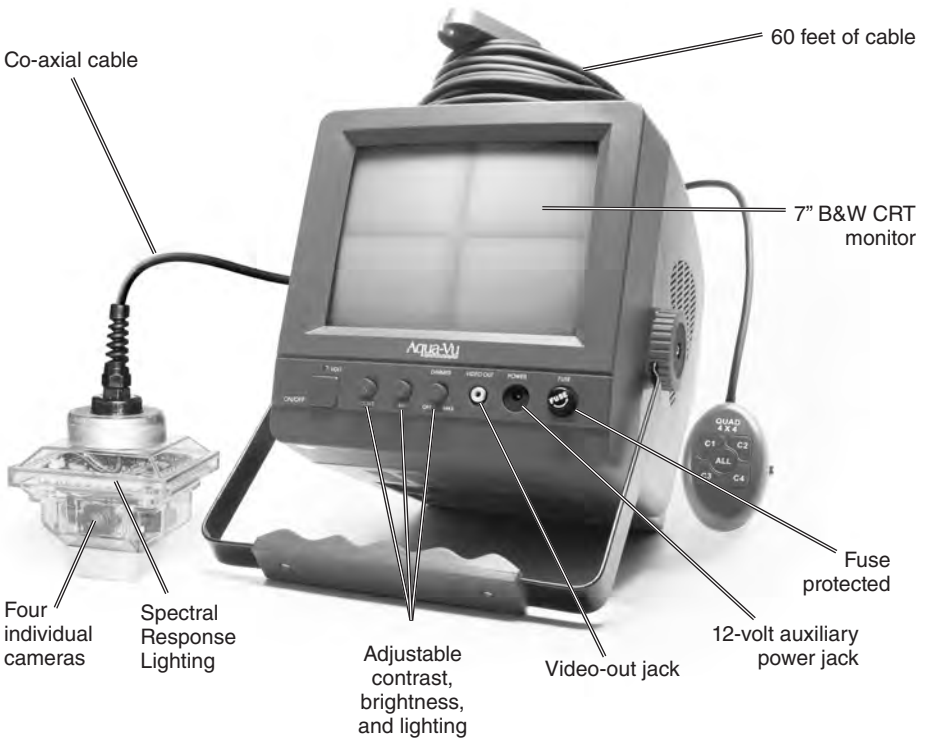
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Become an Underwater Explorer

Congratulations! Your new Aqua-Vu Underwater Viewing System allows you to become an aquatic explorer without getting wet! From a boat or pier, watch the underwater world on your Aqua-Vu's monitor as you swim the fish camera over the bottom landscape. Or, with camera lowered through a hole in the ice, see how approaching fish react to your bait!

However you employ your Aqua-Vu — as a serious fishing tool on open-water or on ice; for observing and learning about nature; for watching small children or pets; or for security purposes — you will experience a fascinating new real-life view! The Aqua-Vu has the following features.



Fold-up carry handle



Internal battery



Convenient cable wrap

In Your Aqua-Vu Package

The following items come with your Aqua-Vu Underwater Viewing System.



B&W CRT monitor



Padded protective monitor cover/sunshield (weatherproofs the monitor)



Spectral Response (SR) lighting. Four banks of top-mounted red and blue LEDs-- 40 in all-- offer optimum light frequency for 360's four cameras



Rechargeable 12-volt, battery



Battery Charger



12-volt Power Cord with Cigarette-Adapter

Warranty Card

Stop Card

Manual

About your Aqua-Vu 360 - with full-circle viewing!

Aqua-Vu's 360 quadruples underwater viewing with complete hemispheric vision! The 360 is really four cameras in one. That translates into a split-screen, four-direction view of the underwater scene.

With the 360, an ice fisherman in a 4-hole fish house can simultaneously keep tabs on all four lines. The angler/viewer sees fish approaching from all directions, not just one. Excited whispers like, "Hey, a fish is coming towards my jig!" will now be joined by, "Watch it! There's a fish near your bait, too!"

The 360 is designed for ice fishing. But it also has open-water applications, ideal for multi-directional explorations of brush piles, root networks, and other bass and crappie haunts. 360's all-direction viewing capability means that from anchored boats and piers one can forward-view, back-view and observe previously unseen off-to-the-side movements - all at the same time!

For enhanced nighttime viewing with less particle reflection, the 360 features Aqua-Vu's Spectral Response (SR) lighting. Four banks of top-mounted red and blue LEDs-- 40 in all-- offer optimum light frequency for 360's four cameras.

COMPLETE SYSTEM, OR CAMERA-ONLY

Viewers may purchase a complete 360 system, which includes the 360 camera with 60-foot cable and 7-inch monitor screen. Or, the 360 "Camera-Only" with 60-foot cable may be purchased separately for use with one's own television or other monitor. Either way, the angler/viewer enjoys four-way, split-screen viewing.

Your Aqua-Vu 360 Package Includes:

- 360 camera with full circle viewing, 4 bank top-mounted Spectral Response lighting and 60 feet of aramid core, reinforced cable.
- 7" 300V CRT monitor
- Padded protective monitor cover with zip out sunshield
- Spring-loaded handle / adjustable tilt bracket
- Fold-in cable keepers
- Rechargeable 12v battery (installed in monitor)
- Battery charger
- 12-volt power cord with cigarette lighter style plug
- User's Manual & Warranty Card 360
- Camera-Only Includes: 360 camera with 4 bank top mounted Spectral Response lighting and 60 feet of marine cable.

OTHER PACKAGE FEATURES

SUNSHIELD USE: For daylight viewing, pull all four flaps forward and zip together to create the sunshield.

PROTECTING MONITOR SCREEN: To protect monitor screen for transporting and storing the 360, unzip the four sunshield flaps. Fold them against the monitor's front, starting with the left flap, then the right flap, securing each with the velcro pads. Bring the lower flap up and the top flap down.

ADJUSTING MONITOR TILT: The bracket's handle design allows tilt adjustment of the monitor. Pull out and rotate the circular knobs to adjust the angle of the monitor or to use as a carrying handle.

CONNECT BATTERY AND MONITOR: Open the battery compartment located on the back of the monitor. Push the connectors onto the battery terminals. **IMPORTANT:** Make sure the red (positive+) connector goes on the red (positive+) terminal of the battery.

Product Safety

Always keep camera cable away from ice augers, propellers, etc.

Keep the monitor and camera away from portable heaters, radiators or other heat generating equipment.

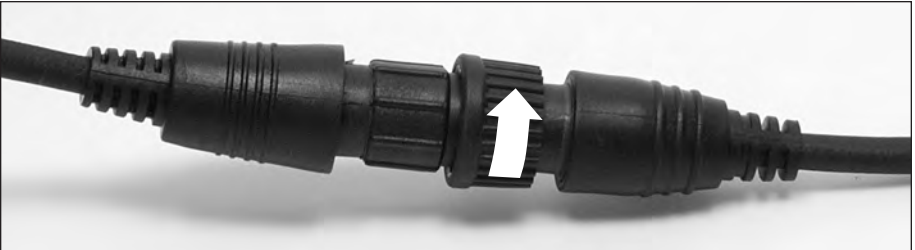
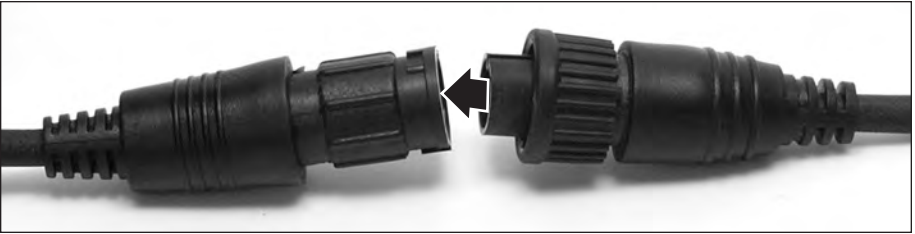
Avoid wedging camera in rocks, roots, submerged trees, or underwater debris.

Do not expose the monitor to rain and do not store unit in damp places.

Do not attempt to disassemble the waterproof casing of the camera. This voids the warranty.

Connecting the Camera and Monitor

Attach the Aqua-Vu camera cable to the monitor cable using the round 4 pin male and female connectors. Secure the connection by turning the lock ring clockwise until it snaps in position.



Powering the Aqua-Vu

The Aqua-Vu comes with a rechargeable 12-volt, 9-amp sealed and spill-proof battery designed to fit securely in the back of the monitor. There is no need to add water or electrolyte.

Charging the Battery

To charge the battery use the battery charger that came with your Aqua-Vu. Recharge the battery by plugging the barrel connector, on the end of the charger, into the battery charging port on the back of the monitor. Plug the charging unit into a 120 VAC power source.

Note: Battery is pre-connected to a charging circuit board (inside the battery compartment) to allow for easy charging access.

The battery charger has an LED charge status indicator. With the charger powered and attached to the rear battery charging port, you will see either a red or green LED lit.

Red indicates a drained battery, or a drained battery that is being charged.

Green indicates that the battery is fully charged and ready to use; disconnect the battery from the charger.

Note 1: Whenever replacing the battery be sure to reconnect the battery properly: RED (+) lead to RED (+) terminal, and BLACK (-) lead to BLACK (-) terminal.

Note 2: Charge battery for 8 to 12-hours before first use of the Aqua-Vu. Watch battery charger for charge indication LED (red = low battery power, green = 80 to 100% battery power).

A fully charged battery can operate the Aqua-Vu continuously for up to 6 hours. For longer viewing time the unit may be powered by a larger external 12-volt battery using one of the following:

- Power cord with cigarette adapter (included)

- Power cord with alligator clips (purchased separately, see accessories)

Battery Care

Follow these simple rules for prolonged battery life and efficient use of your Aqua-Vu Underwater Viewing System:

- Fully charge the battery as soon as possible after purchase.

- Recharging is recommended after every use. When not in use, recharge every six months.

- Store battery between 30 and 70 degrees F. Service life is shortened by temperatures above 8°F and below 0°F.

- Fasten battery securely in its compartment and minimize shock to the battery.

- Charge battery according to proper procedures. Continuous overcharging or undercharging is detrimental.

Low vs Fully Charged

The battery charger (included) will charge the battery from very low (10 volts) to fully charged in about 24 hours. A voltmeter helps determine charge in the battery.



Immediately after charging, a voltmeter might read 14 volts or more. Peak performance often occurs at 13 to 13.5volts. Without a voltmeter, a general rule is to charge the battery for a minimum of 12 hours but no more than 24 hours.

Over Charging

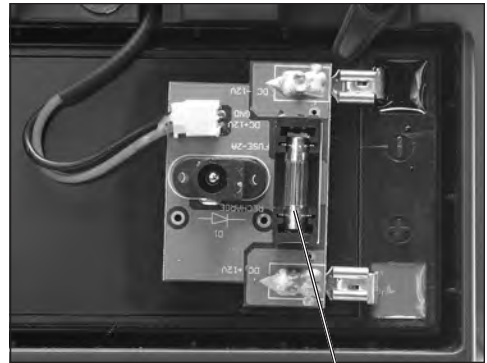
The charger provided with the Aqua-Vu will not overcharge the battery in most cases. Do not charge for more than 24 hours. If you do not use our recommended charger avoid using a charging system with more than a 2-amp output. At too-high charging rates, a battery progressively heats up and may be ruined in a few hours.

Under Charging

Batteries stored too long in discharged conditions accept current at far-below-normal rates during charging. A battery may accept an increasing amount of current until a normal level is reached. However, some discharged batteries never recover. And discharged batteries that freeze may be permanently damaged.

Fuse Protection

A 2 amp fuse is located on the circuit board inside the battery compartment. This fuse is designed to blow if the battery is improperly connected, or if a short occurs in the system. Always make sure connections are positive (+) to positive (+), and negative (-) to negative (-).



Fuse

Replacing the Battery

The internal battery can be replaced without removing the protective softcase. The back side of the protective case has a flap which allows the operator to access the battery compartment. To replace the battery:

Raise the flap and remove the screws that hold the battery cover in place.

Remove the cover and pull the battery charging circuit board off the two battery terminals.

Turn the two battery tabs 90 degrees so they are no longer over the battery.

Remove the battery. This may require that you tilt the monitor until the battery slides out.

Insert a new battery.

Turn the battery tabs over the battery. This holds the battery in place.

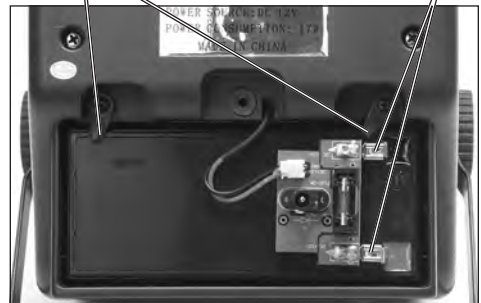
Connect the charging circuit board to the two battery terminals, fuse must be facing up.

Replace the battery cover and secure in place with screws.

1. Remove screw from battery cover

2. Turn tabs off battery

3. Remove circuit board from battery terminals



Using the Aqua-Vu Controls

The Aqua-Vu has the following controls located below the monitor.



On/Off — The ON/OFF Power button turns the monitor and camera On or Off. After tuning on the Aqua-Vu, the screen may take several seconds to appear. When On, you will see the LED, above the button, illuminate. As battery power becomes depleted, this LED begins flashing green and red.

Contrast — The “CONT.” knob controls image contrast. Adjust according to your preference.

Brightness — The “BRI” knob controls image brightness. Adjust according to your preference.

Dimmer — The “DIMMER” knob controls brightness of the camera’s Aqua-Vu lights. Adjust according to light conditions.

Video Out — The “Video Out” jack is for connecting your Aqua-Vu to a hand-held camcorder, or to a larger external monitor. Your Aqua-Vu will work with any camcorder or any monitor that accepts the NTSC video signal, and has a standard “Video-In” jack. Use any RCA-style patch cord that comes with most camcorders (also available at most consumer electronics stores.) For external video recording, plug one end of the cord into the “Video Out” jack on the Aqua-Vu; plug the other end into the “Video-In” jack on your camcorder. You can now watch your Aqua-Vu monitor and record at the same time.

Power — This jack allows you to plug in the 12-volt power cord with cigarette adapter (included). Using this power cord bypasses the internal battery power and does not affect battery life of the internal battery. This is not a charging port (see CHARGING PORT).

Fuse — This is a 2 amp fuse (5mm x 20mm) designed to blow if the power cord is improperly used or if a short occurs in the system.

Charging Port (rear of monitor) — Input allows you to plug in the battery charger for easy charging. NOTE: It is not necessary to remove battery cover to recharge battery. Remove battery cover only when replacing or servicing battery.

Camera Lights — To turn the camera lights on/off, flip the switch up, or down on the right side of the remote.

AV360-POD Switch Box

ON / OFF Switch — Turns Aqua-Vu Spectral Response LED lights on and off.

C1 / C2 / C3 / C4 — Pressing any of these buttons selects a different Quad camera view, and displays that view in full-screen mode on the Aqua-Vu monitor.

ALL — Pressing this button returns the monitor to the default 4-way split screen view.

Viewing Images on the Monitor

To view images on the monitor during sunny conditions use the sunshield flaps attached to the protective case. For daylight viewing, pull all four flaps forward and zip together to create the sunshield, as shown below.

If images are difficult to see on the monitor you can adjust your viewing angle by using the tilt bracket. The bracket's handle design allows tilt adjustment of the monitor.

Viewing Tips – On the Water

With the Aqua-Vu system assembled, connected and charged, begin viewing simply by turning the unit on. You will see a live picture of whatever the camera “sees” at a given moment. This could be the inside of your boat, nearby trees, or your fishing partner’s face.

Begin serious underwater viewing by lowering the camera toward the bottom. The bottom provides a point of reference that helps you perceive sizes of fish and objects below. Your viewing might be vertical — studying bottom and fish straight below, as from a pier or an anchored boat. Or you might desire a broader view of an area’s bottom features and fish distribution. When viewing larger areas, anglers slowly move along in a boat, eyes glued to the monitor’s ever-changing picture of what the camera sees underwater.

In most waters, fish relate to bottom structure. So, while drifting or slow-trolling, you’ll need to guide the camera over the ups and downs of bottom contours. You will quickly learn how to “swim” the camera over bottom terrain. With cable in hand, simply raise or lower the camera, paying out more or less cable, depending on depth and boat speed. As you move along, you should see on your monitor screen a continuous picture of the passing bottom and the fish-holding watery zone just above it.

When viewing over soft bottom, make sure the camera is actually above the bottom and not plowing or “stirring up” the muck. If the camera is digging into bottom, you’ll only see a dark screen. Remember, if you can’t see bottom, raise or lower the camera to “look” for it. If your camera becomes snagged, maneuver the boat so the direction of pull is the reverse of what it was when the camera became snagged. A little jiggling or light tugging will usually enable you to back the camera out of a snag. Avoid pulling the camera through heavy weed cover or thick brush.

With your Aqua-Vu, you will be fascinated and often surprised by the ever-changing view of underwater scenery: rocks, weeds, other bottom features — and fish! (For more advice and viewing tips see “**Frequently Asked Questions.**”)

Viewing Tips – On the Ice

Your Aqua-Vu is an invaluable ice fishing tool — a giant leap beyond mysterious flashes and unidentified “fish” on a depth finder. Aqua-Vu enables you to actually “see” the real picture! Note these huge advantages:



Zip flaps together to form sunshield.

Rotate and pull out the circular knobs to adjust the angle of the monitor or to use as a carrying handle.

View bottom structure and distinguishing features. Observe weed lines and weed characteristics, sand versus muck, big rocks versus small rocks, and transitions from one bottom type to another. That's a big help in precisely locating your fishing holes and placing your ice fishing house!

Sharpen your fishing techniques — watch your bait and see how approaching fish react to it. Learn what baits, lures, colors, and jigging actions attract fish and trigger strikes.

Identify fish species and size. Viewing actual fish with an Aqua-Vu camera solves mysteries about what depth finder signals really show. This real picture helps with choices about fishing technique. Knowing whether fish are present, or whether your target species is present aids in deciding to stay or to leave a spot.

When testing a new fishing location, you may bore two holes a few feet apart — one for your fishing line, the other for lowering your Aqua-Vu camera. You can also rig the camera in a down-viewing position for fishing and viewing in the same hole. Test-fish for a few minutes in different places. It's possible to choose or eliminate potential fishing spots on the basis of “seeing” or not seeing fish while moving around and prospecting.

Aqua-Vu's ICE-POD is an adjustable tripod that sets over the camera hole, holds camera cable, and is a handy accessory for easy adjustment of camera direction. Aqua-Vu's MO-POD II is a remote-controlled and motorized unit for convenient “no hands” rotation of the camera. (Available from retailers or online at www.aquavu.com.) For ice-fishing, most camera users remove the open-water ballast weight and stabilizing fin.

Storing the Aqua-Vu Underwater Viewing System

Storing the Camera Cable

To store the camera's 50 or 100 foot cable rotate the two pivot arms at the top of the cable keeper. Wind the cable around the cable keeper in a clockwise direction.

Protecting the Monitor

To protect the monitor screen, when transporting and storing the Aqua-Vu, unzip the four sunshield flaps. Fold them against the monitor screen, starting with the left flap, then the right flap. Bring the lower flap up and the top flap down, securing them with the Velcro strips.



Frequently Asked Questions

Question	Answer
How far can I see?	Naturally, the clearer the water, the farther you can see. As a general rule, in water the camera can see twice as far as the human eye — meaning that if you can see 3 feet down you will be able to see approximately 6 feet in front of the camera. But this is just a rule of thumb. Water bodies vary in water clarity and other characteristics. For anglers studying bottom structure, 2 feet of visibility is sufficient for underwater viewing, though in very clear water, it is possible to see up to 30 feet or more.
When do I use the lights?	The Aqua-Vu lights in your Aqua-Vu camera are designed for use in low-light conditions. Turn the lights on for enhanced visibility in low light conditions.
Can I splice the camera cable to obtain more length?	No. Attempting to splice in additional cable violates the waterproof integrity of the camera and cable. This will void your warranty.
Can I use my Aqua-Vu in saltwater?	Yes. All Aqua-Vu cameras are saltwater-rated, constructed with stainless steel hardware and materials that are impervious to corrosion. We recommend rinsing salt water off camera using clean water and a soft cloth after every use.
Will my unit work in subfreezing conditions?	Aqua-Vu systems are designed to operate at temperatures ranging from -10 to 120 degrees F. Expect your battery life to decrease in cold conditions.
How wide is the camera's angle-of-view?	Your camera lens has a viewing angle of 360 degrees. At 4-1/2 feet in front of the camera you will be viewing an image approximately 6 feet wide.
Can I connect my Aqua-Vu to a larger monitor or to a hand-held camcorder?	Yes. For use in a permanent fish house, in a large boat with a built-in video system, or elsewhere, your Aqua-Vu can be hooked up to a larger external TV, VCR, or camcorder, provided it has a VIDEO-IN jack.
Is Aqua-Vu legal?	To our knowledge there are no restrictions that regulate the use of Aqua-Vu underwater viewing systems. Aqua-Vu is an approved pre-fishing tool in B.A.S.S. and P.W.T. events and for other tournament trails across the country.
How do I turn on the Spectral Response (SR) lights?	To turn the camera lights on/off, flip the switch up, or down on the right side of the remote.

Troubleshooting

Problem	Cause	Solution
Nothing happens (Screen fails to light up) when the unit is turned on.	Battery not connected.	Properly connect the battery: red to red, black to black.
	Battery not charged	Attach battery charger and charge battery for 12 - 24 hours.
	Fuse may be blown.	Check fuse beneath battery cover. Replace if blown. Check fuse beneath front of monitor screen. Replace if blown.
The screen lights up but I see no picture.	Camera cable is disconnected.	Plug the camera connector into monitor connector.
	Camera cable or connectors might be damaged.	Check cable and connectors for damage. Consult the "How to Obtain Service" section in this manual.
I lowered the camera to the bottom but can't see anything.	The camera may be buried in muck!	Raise the camera off the bottom.
	The water might be very murky.	Turn the camera lights On for enhanced viewing in low-light conditions.
The camera seems to work above water but not below.	The camera is not orientated correctly.	Try lowering camera until it hovers just above bottom. You should now be able to make out the outline of the lake bottom. Without the solid reference point of the bottom, the monitor may appear to look blank.
	The water clarity is poor.	What you see on the screen is directly related to water clarity. If the water is dirty, visibility will be limited. Again, try to keep the camera running a foot or less above bottom.
There is a nick in the camera cable.	Cable may have gotten snagged on a sharp surface.	See the "How to Obtain Service" section of this manual for instructions on replacing the camera.
The image on the screen has a dark margin around it or is blurry.	You're seeing on-screen symptoms of a weakening battery.	Charge the battery, install a charged battery or connect to an external battery.

Accessories

All of the following accessories can be order online at www.aquavu.com.

12-volt Battery

Additional power source for Aqua-Vu.



12-Volt Battery

Universal Battery Charger

The universal battery charger allows you to charge your 12 VDC power supply. It also allows you to supply power directly to the Aqua-Vu, using the power jack on the front of the unit, from a 120 VAC outlet.



Universal Battery Charger

Power Cable with Alligator Clips

An optional power cable can be purchased for powering the unit with an external 12-volt battery. When plugged into the Aqua-Vu monitor and connected to an alternate 12-volt battery, the unit no longer draws power from the internal 12 VDC battery. This is a very handy option for powering the Aqua-Vu for extended periods, such as inside a boat, ice fishing house, or recreational vehicle



Power Cable with Alligator Clips

To use the cable perform the following steps.

Plug the barrel connector end of the power cable into the POWER input jack on the front face of the monitor.

Connect the positive (red +) clip on the power cable to the positive terminal on the battery and connect the negative (black -) clip on the power cable to the negative terminal on the battery.

NOTE: Powering the Aqua-Vu with this power cable and an external 12-volt battery will bypass the internal battery. This unit does not come with a 12 VDC battery.



Use power cable with alligator clips to attach an external 12-volt battery.

Ice Pod

The Ice Pod is a camera positioning tripod for stabilizing and rotating the camera while ice fishing. The tripod allows you to manually rotate the camera.



Ice Pod

Mo-Pod 2

The Mo-Pod2 is a motorized camera positioning tripod for stabilizing and rotating the camera while ice fishing. It can be controlled remotely using the included hand-held remote.



Mo-Pod 2

Warranty Information

One Year Limited Warranty

Outdoors Insight, Inc. warrants this product to be free from defects in materials and workmanship for one year from the date of purchase. This warranty applies to customers who properly fill out and return the warranty card included with this manual. Failure to complete and return the warranty card voids the warranty. Outdoors Insight, Inc. will, at its sole discretion and without charging the customer, repair or replace any components that fail in normal use. Failures due to abuse, misuse, or unauthorized alteration, modification or repair are not covered. Cut camera cables and submerged monitors are not covered. Broken cable and/or monitor connectors will incur a service repair charge. The warranty is valid only for the original owner who purchases the unit from an authorized Aqua-Vu dealer. Products purchased from on-line auction sites are not considered under warranty.

A two year extended warranty is available through Outdoors Insight, Inc. You may purchase this warranty within 30 days of purchasing the unit by visiting www.aquavu.com to print the form.

How to Obtain Service

We want our products to provide you with a pleasant on-the-water experience. That means maximum customer satisfaction. If you have a problem with your Aqua-Vu unit please contact the Outdoors Insight's toll free number at (866) 755-6303 for a Return Authorization Number (RA#). No service returns will be accepted without this pre-return authorization number, which must be clearly marked on the outside of the package. Outdoors Insight, Inc. retains the exclusive right to repair or replace the unit at its discretion.

The customer is responsible for shipping costs associated with returning the unit to Outdoors Insight, Inc. Outdoors Insight, Inc. will pay for shipping the repaired unit back to the customer while it is still under one-year warranty. All out of warranty services will be charged a fee for service and shipping which must be paid in advance. After obtaining a Return Authorization number, the unit should be securely packed and shipped "pre-paid freight" and insured to Outdoors Insight, Inc. It is the consumers' full responsibility to track their products sent out in the mail or other forms of delivery service. Outdoors Insight Inc. will not be liable for lost packages sent out in the mail. Unless specified otherwise, do not include battery or other accessories when returning the Aqua-Vu unit for repair. Outdoors Insight, Inc will not be responsible for lost or damaged accessories. Please allow a minimum of 10 business days prior to calling on the status of your repair.

Outdoors Insight
34076 County Road 3
Crosslake, MN 56442
1-866-755-6303
RA# _____

Note: The RA number must be clearly marked on the outside of the package