SeaViewer Cameras, Inc.

OFFSHORE CAMERA™

Analog Standard Definition

User's Manual

SeaViewer Cameras , Inc.

VIEWING, RECORDING, OR EDITING THE VIDEO FROM OUR <u>COMPOSITE VIDEO</u> (ANALOG) CAMERAS

The Basics

Our analog cameras output "composite" video, which is carried via COAX cable, terminating with an RCA-type video plug. This plugs into the same standard jack that VCR's have historically used to connect to TV's - typically a phono-looking jack with a yellow plastic insert (audio uses red/white centers). We do not use the audio. This video can be viewed on a display (such as a TV) that has the appropriate matching yellow Video-IN jack. It can also be viewed or recorded with a camcorder (or VCR) which has such an input jack. The video will be *recorded* in "analog" if your recording medium is analog tape. Otherwise your recorder will convert our analog signal to its internal digital format before recording. Our camera's live video signal is NOT compatible with devices that ONLY accept a "digital" input signal.

Using a SeaViewer DVR
to <u>Record</u> or <u>Transfer</u> the Video

The two models of *D*igital *V*ideo *R*ecorders (*DVR-SD* & *DVR-HDD*) which we offer (in our *Surface Consoles*) accept the analog video from our cameras. They convert the analog, "composite" video from our camera to their "digital" format, and then store it on either an internal hard drive or an SD Card, depending on the model. The video can be re-played from the DVR and viewed on the Monitor in the Surface Console. For further distribution and/or editing, the DVR's hard-drive or SD Card can be removed to transfer the video to a PC (or MAC), which must have a USB port or Card Reader, respectively, along with the appropriate software for video viewing or editing installed. We include a basic "viewing" application (for a PC) on our CD accompanying the DVR. In addition, most versions of *Windows* come with "*WINDOWS MEDIA PLAYER*" for viewing video, and "*WINDOWS MOVIE MAKER*", which is a beginner's editing program. More sophisticated video software is available from many 3rd parties.

Once connected, the video files on the storage media can be copied to your permanent hard drive, and the copies edited from there. These raw files will have the ".AVI" extension, and use the "*H.264*" CODEC for compression and decompression. Since this is some of the latest compression technology, you will most likely need to download the latest "*H.264*" software drivers for your System, and install them in order to handle this video, if using anything *other than our "basic player". Some common files that can be found FOR FREE are:

       1. Ffdshow   2. K-Lite Codec Pack (Standard installation)

You can download a SeaViewer *TEST VIDEO* to try playing to evaluate your hardware/software compatibility here:
    http://www.seaviewer.us/video_avi_testing/SeaViewer_DVR_output_test_video.avi

*If you cannot modify your system to play the above video, your player may not be able to play files recorded by our DVR. (NOTE: The SeaViewer **DVD-R** (DVD Burner) records live camera video digitally on recordable DVD disks, viewable on most players.)

Using only a Computer to View or Record

If you wish to view/record live camera video directly to a computer in real-time, you will need a corresponding Video-IN jack for the computer, which is an RCA-type connection accepting "composite", analog video input. If you have a PC or laptop that <u>DOES NOT</u> have such a jack, you can obtain ONE of the following:

A) a "Video Capture" card, and install it inside the PC. For a laptop, there are PMCIA cards available that plug into a slot.
     OR . . . get a convertor cable with RCA Jack on one end, and USB plug on the other end . . .
B) <u>In the United States</u>, *Best Buy* stores sell the following model which may work for your PC or MAC:
Elgato Systems – Video Capture Device, Model: 10020840 | SKU: 1305171914 | price: US$ 84.78.
<u>OUTSIDE THE USA</u>, try finding the above or search for a USB "Video Grabber Cable" which accepts the video plug from our camera on one end, and has a USB plug on the other end. We cannot provide tech support for any of the above.

Now, with the camera plugged into your Video-IN jack, the computer will be able to receive the video. From that point, it is the function of whatever software you have installed on the computer to view the video, record it, edit it, and make presentations. Most versions of *Windows* come with "*WINDOWS MEDIA PLAYER*" for viewing video, and "*WINDOWS MOVIE MAKER*", which is a beginner's editing program. More sophisticated software is available from many 3rd parties.
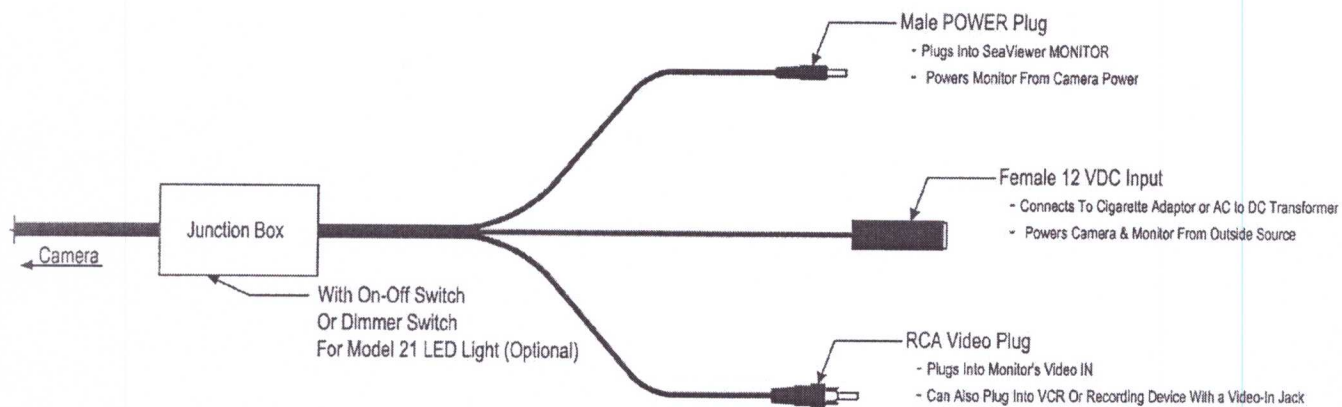
Putting it all Together: VIDEO EDITING & DISTRIBUTION

The manner in which you make "presentations" from the "raw" video is determined to a large extent by:
    a) the type hardware you already have to capture the video   **b)** the method used to get video into the computer
    c) the software you have to process/edit the video **d)** the distribution media you want to present to the end viewer
As the quality of the end product desired increases, so does the learning curve involved to make your video presentable. This will have a profound effect upon the hardware and software, and the recording and editing methods, you need. You should determine your target audience and distribution method at the outset, before any hardware or software is obtained.
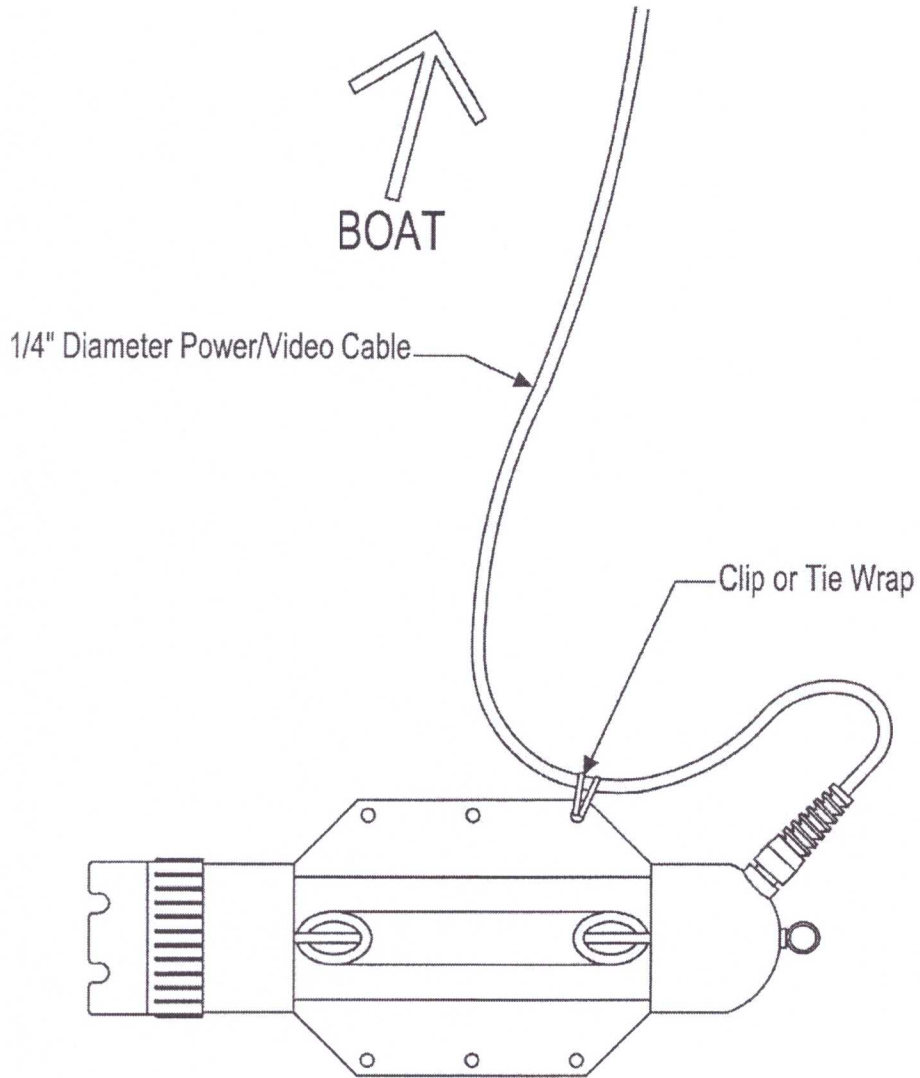
Cable Hook-Up For SeaViewer Camera

Male POWER Plug
- Plugs Into SeaViewer MONITOR
- Powers Monitor From Camera Power

Female 12 VDC Input
- Connects To Cigarette Adaptor or AC to DC Transformer
- Powers Camera & Monitor From Outside Source

Junction Box

Camera

With On-Off Switch
Or Dimmer Switch
For Model 21 LED Light (Optional)

RCA Video Plug
- Plugs Into Monitor's Video IN
- Can Also Plug Into VCR Or Recording Device With a Video-In Jack

Cabling Instructions

1. The system can be run with the camera in or out of the water.

2. Hook the cables up as in the diagram above.

3. An external 12 VDC power source can be used through the cigarette lighter adapter.

4. An external 110 VAC - 220 VAC supply can be used through the AC to DC transformer.

5. The video signal can be run through a VCR, etc. prior to the monitor for recording.

6. CAUTION - The Monitor is sensitive to extreme shock and moisture - it is NOT watertight.

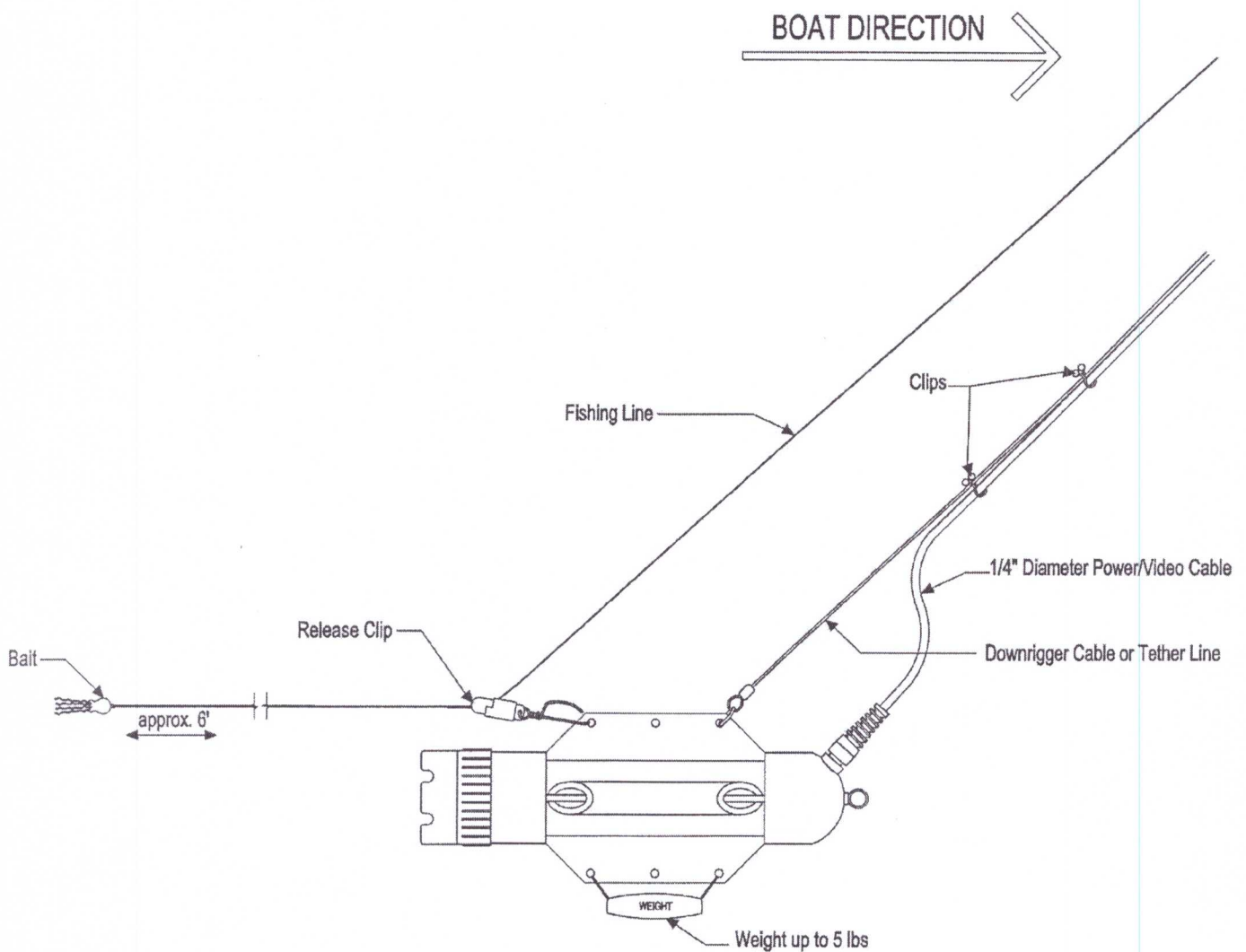# SeaViewer Offshore Trolling Camera
Still Or Drift Bottom Viewing

BOAT

1/4" Diameter Power/Video Cable
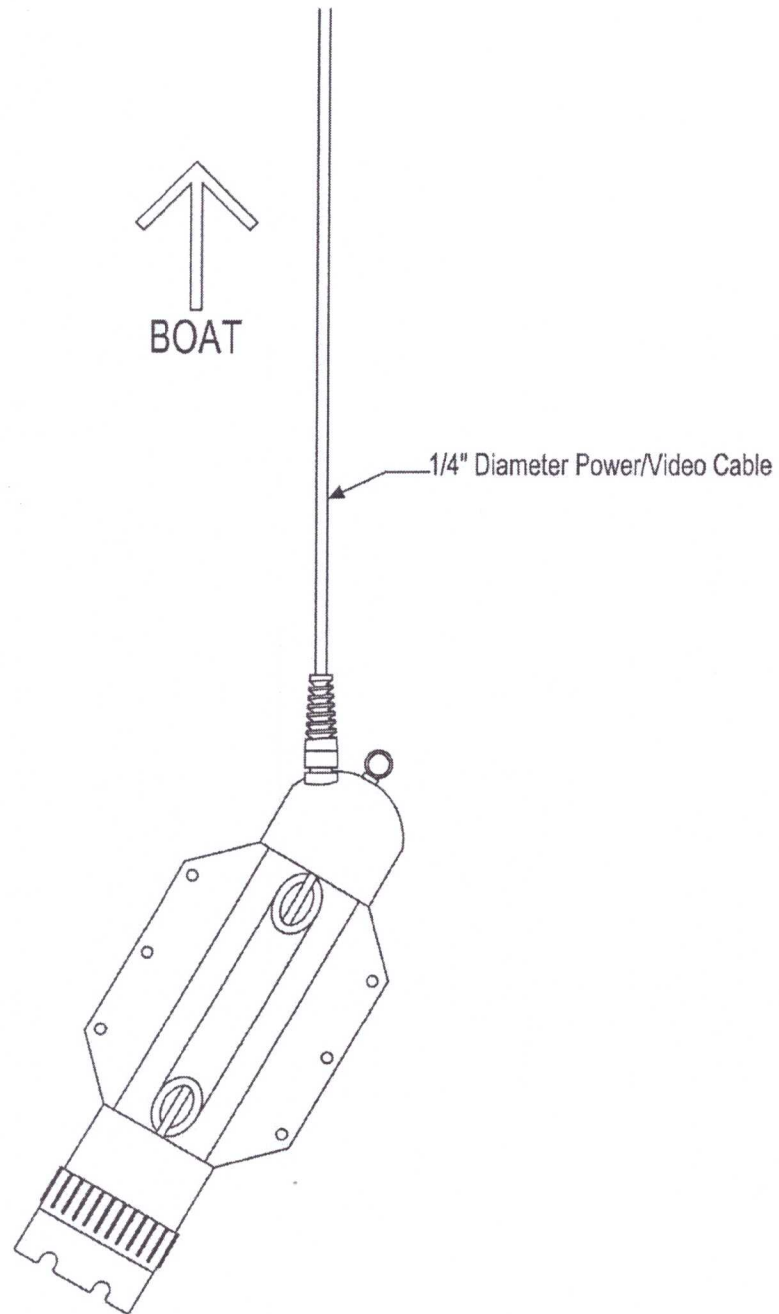
SeaViewer Offshore Trolling Camera
Still Or Drift Horizontal Viewing
Looking Backwards

BOAT

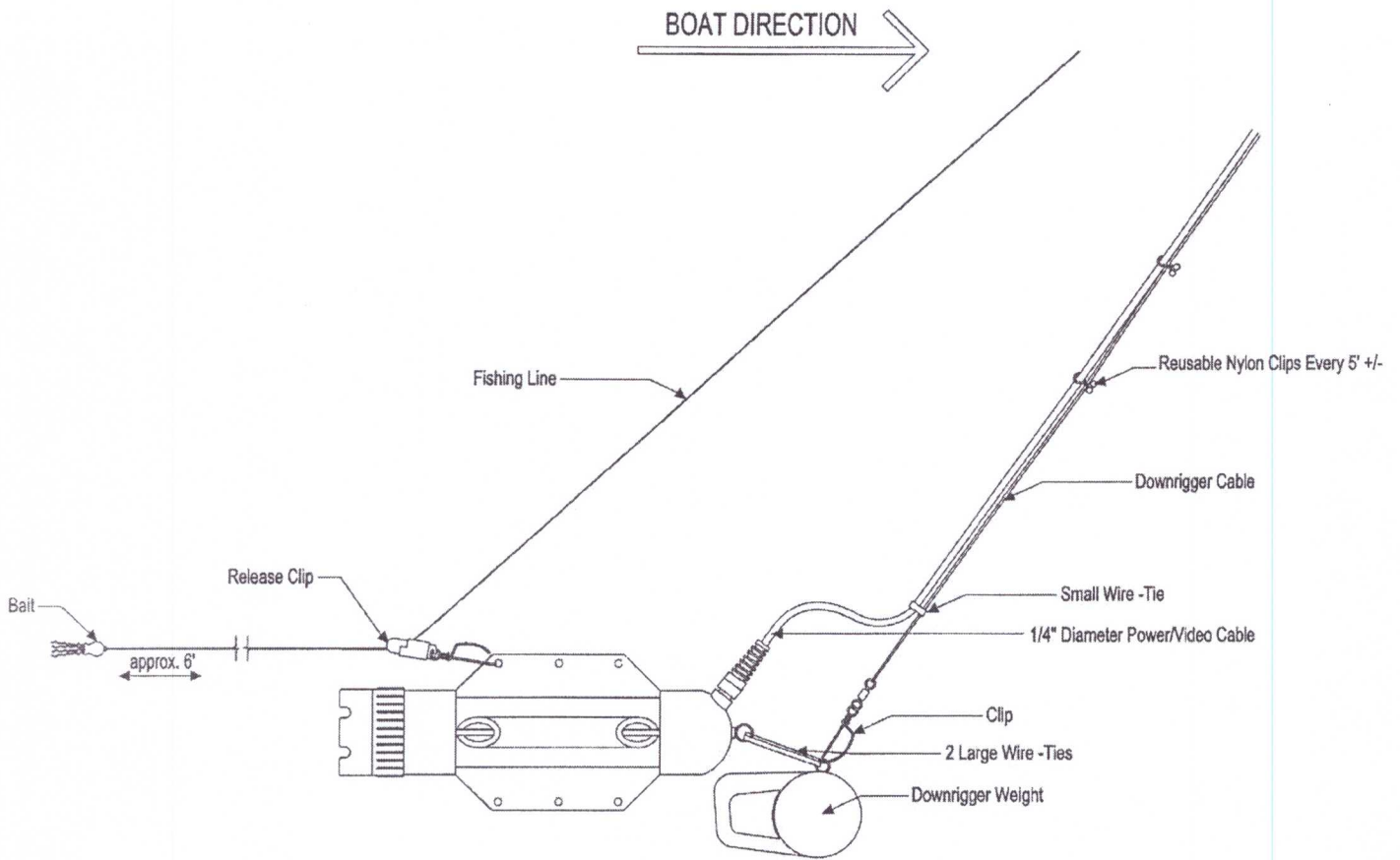1/4" Diameter Power/Video Cable

Clip or Tie Wrap

Change Angle By Using Other Grommett Holes

SeaViewer Offshore Trolling Camera
Rigging For Slow to Medium Trolling
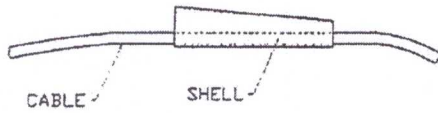## Looking Backwards At Bait/Lure

BOAT DIRECTION →

Fishing Line

Clips

1/4" Diameter Power/Video Cable

Release Clip

Downrigger Cable or Tether Line

Bait

approx. 6'

WEIGHT

Weight up to 5 lbs

SeaViewer Offshore Trolling Camera
Rigging For Fast Trolling
Looking At Bait/Lure

BOAT DIRECTION

Fishing Line

Reusable Nylon Clips Every 5' +/-

Downrigger Cable

Release Clip

Small Wire -Tie

Bait

1/4" Diameter Power/Video Cable

approx. 6'

Clip

2 Large Wire -Ties

Downrigger Weight

SeaViewer Cable Clamp

TAIL WIRE

WEDGE

CABLE

SHELL

SHIM

Step 1

CABLE

SHELL
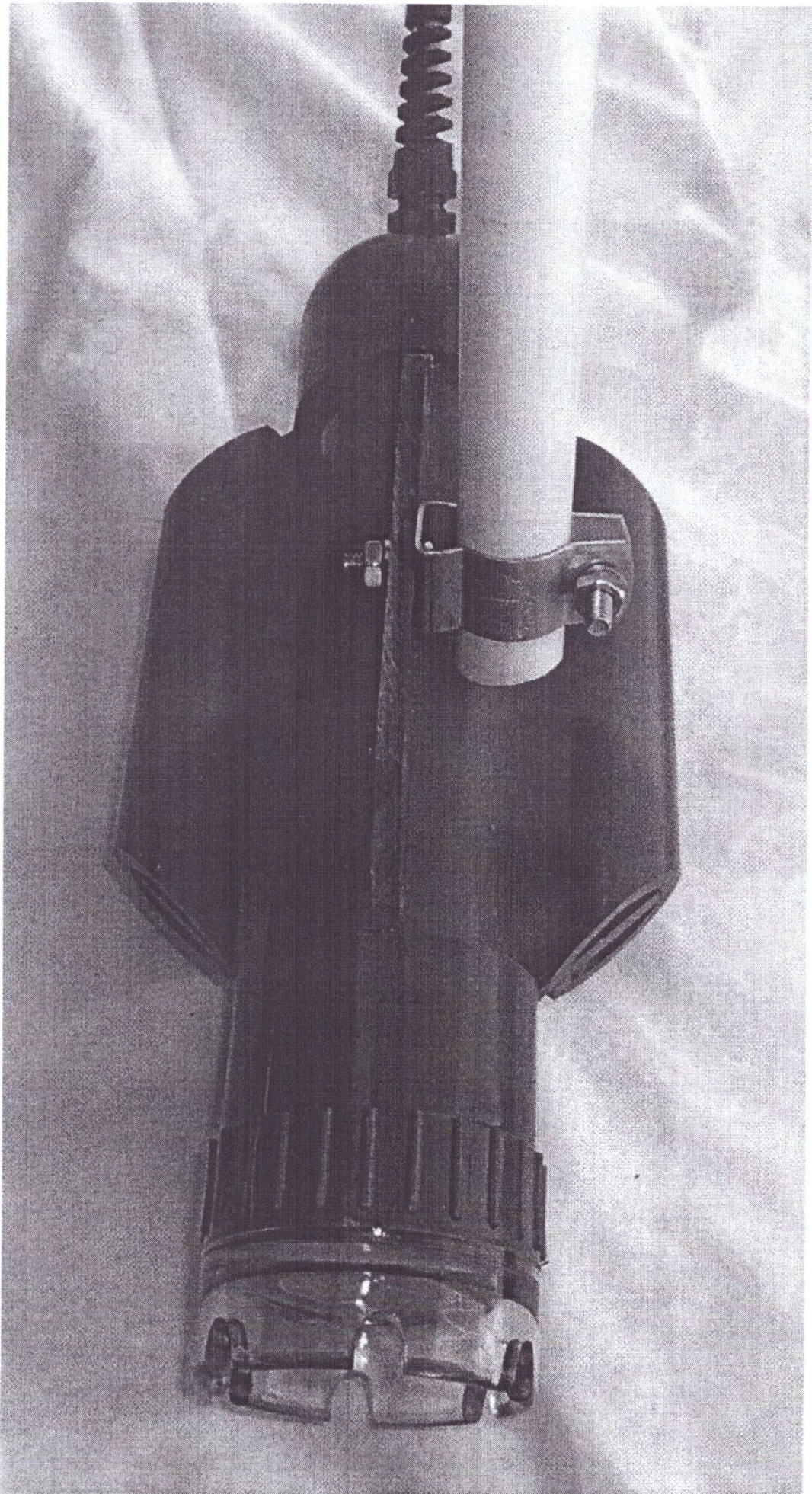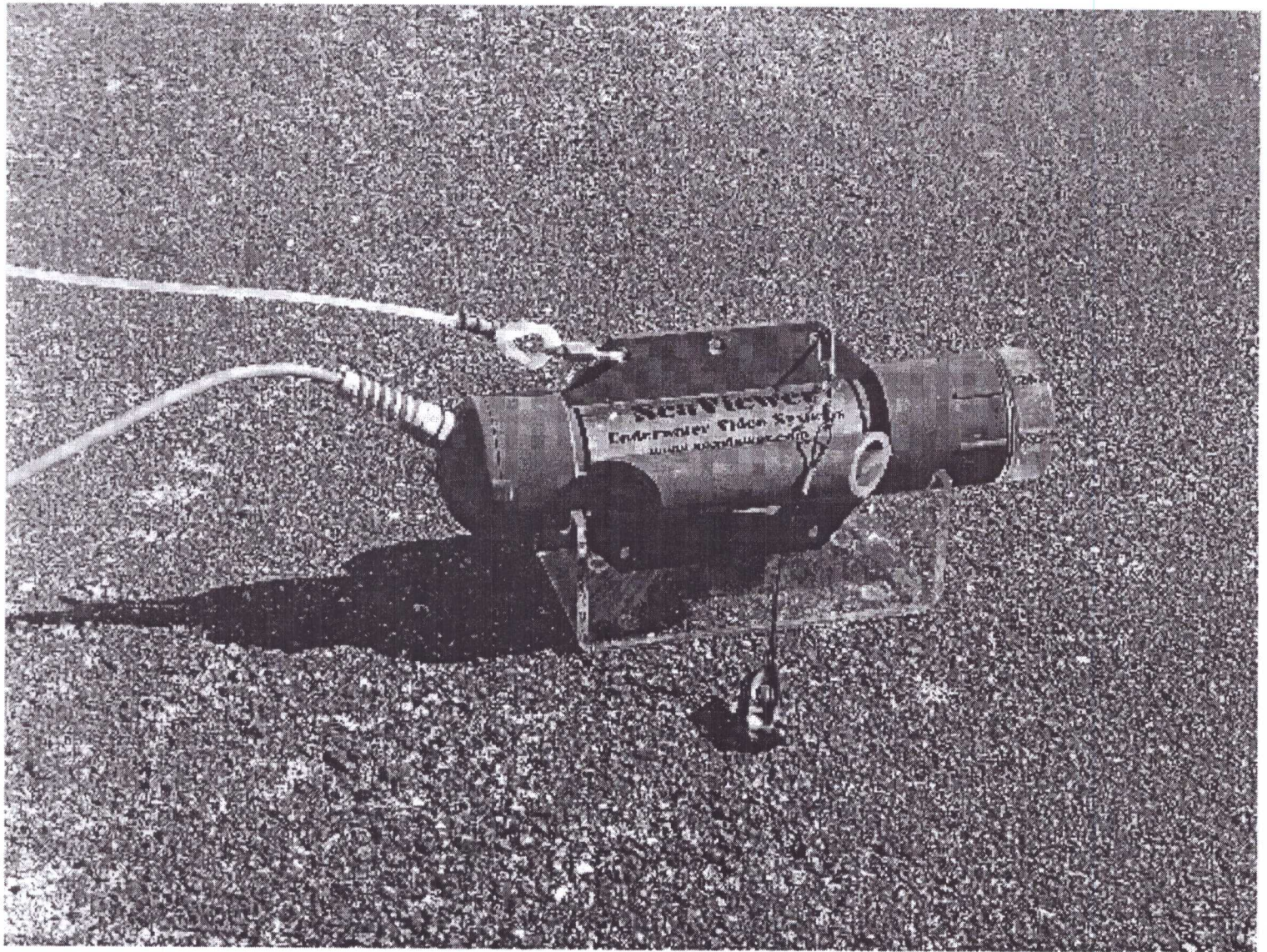
Step 2

SHIM

Step 3

WEDGE

HIT INTO
SHELL

TAIL WIRE
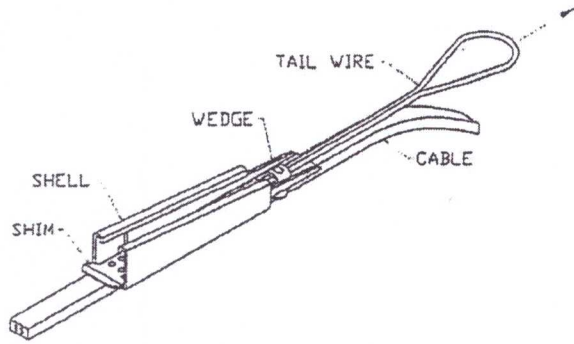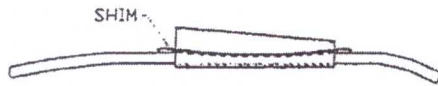
OFFSHORE CAMERA - SMALL CRAFT SUGGESTED TROLLING DEPLOYMENT

PREPARATION:

A) setup downrigger with steel cable and lead weight (typically 8-13 lbs.)
B) video cable can be coiled into 5-gallon (or larger) pail for easy pay-out. Surface connector end in pail first, but leave out enough tail for power/video hookup. Camera into pail last.
C) Have available 3 wire-ties (NOTE: we use 1/4" wide x 12" long "zip" ties)
D) Have available plastic clips that came with camera

DEPLOYMENT:

1) hang weight overboard (or wait till Step #6)
2) slip "wire-tie" thru eyebolt at top of weight
3) thread same wire-tie thru eyebolt at rear of camera body
4) make-up wire tie, but leave 1"-2" loop between eyes so as not to jam eyes together
5) do same with a 2nd wire-tie for "insurance"
6) hang weight and camera over side (if not done in Step #1)
7) attach steel downrigger cable and video cable together 1'-2' above camera with wire-tie
    (NOTE: leave small loop for slack in video cable, and pull this wire-tie tight)
8) attach release clip (or rubber band) to one of top holes in camera fin
9) attach mono (fishing line) to release clip
10) set fishing pole in rod holder and set drag very, very light
    (NOTE: allow this mono to pay itself out off reel until camera is fully deployed)
11) lower weight and camera down into water
12) attach steel downrigger line to video cable with plastic clip
13) continue paying out downrigger line and video cable, attaching clips every 5-10 feet
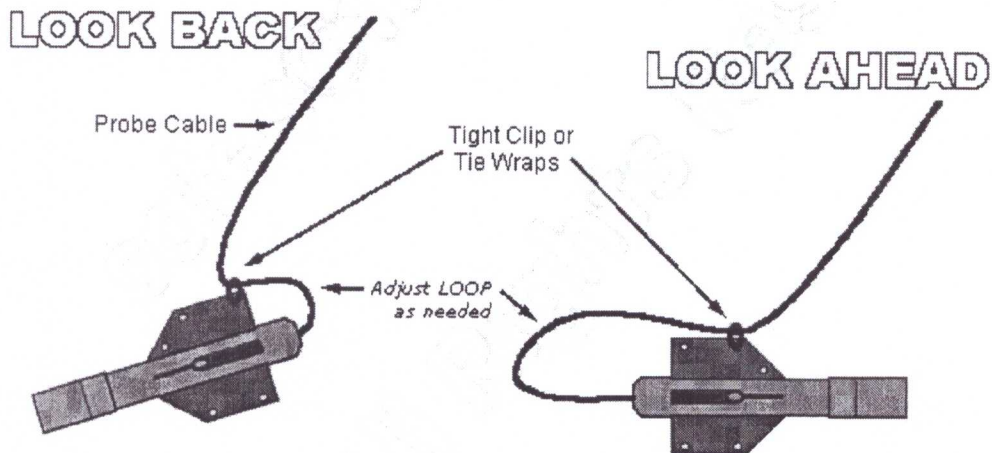14) when camera at desired position, adjust fishing line and reel drag

RETRIEVAL

Reverse of above. Video cable can usually be pulled from plastic clips as downrigger cable is raised, with clips all sliding down steel line to weight.
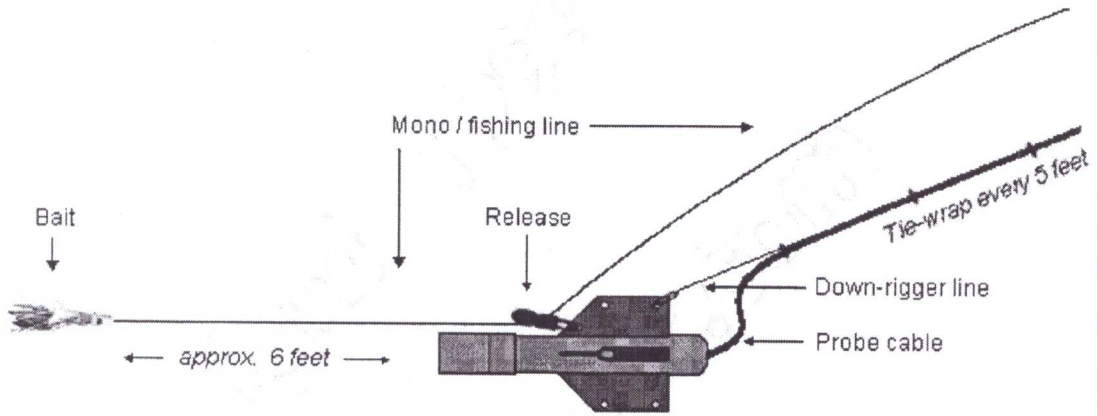
Rigging for DRIFT

HORIZONTAL VIEWING

boat

Probe Cable →

Clip or Tie Wrap

BOTTOM VIEWING

boat
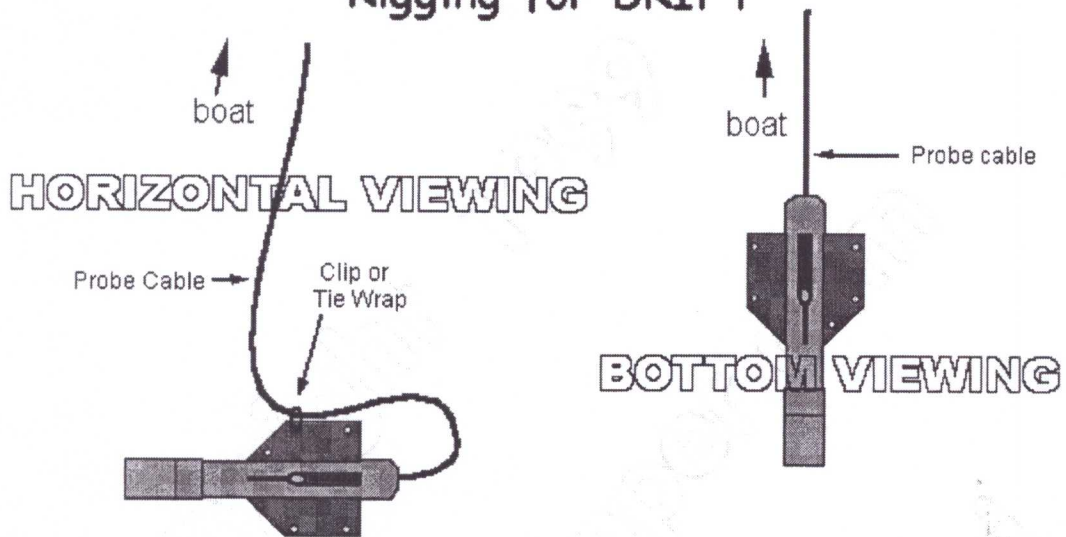
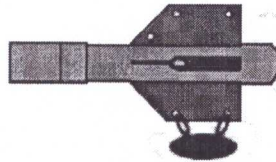← Probe cable

Rigging for Slow Troll (< 2 knots)

DO NOT troll over 2 KNOTS using only probe cable for support.
Trolling speed will affect depth and attitude of probe - the alternate Grommets may be used to change orientation.

LOOK BACK

Probe Cable →

LOOK AHEAD

Tight Clip or Tie Wraps

← Adjust LOOP as needed →

Rigging for Fast Trolling

Mono / fishing line

Tie-wrap every 5 feet

Bait

Release

Down-rigger line

Probe cable

approx. 6 feet

. . . . . to run Deeper . . . . .

. . . . attach Weight to Probe at bottom Grommets.