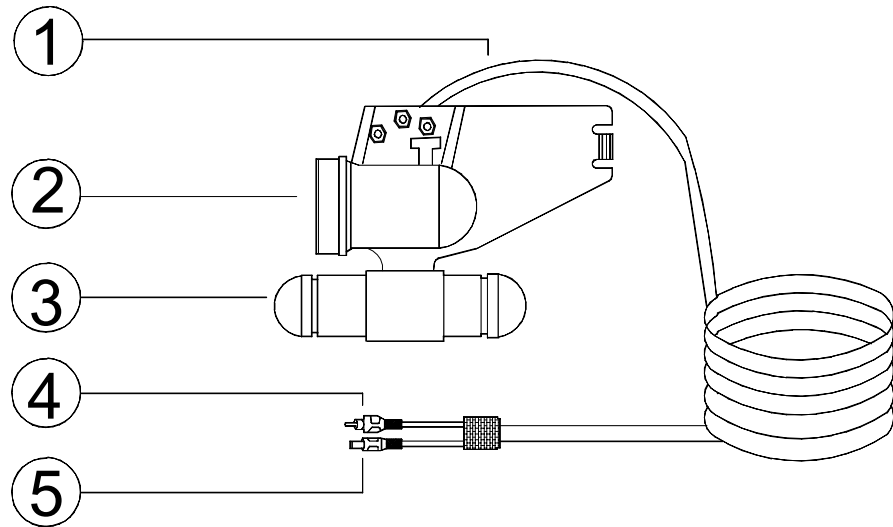




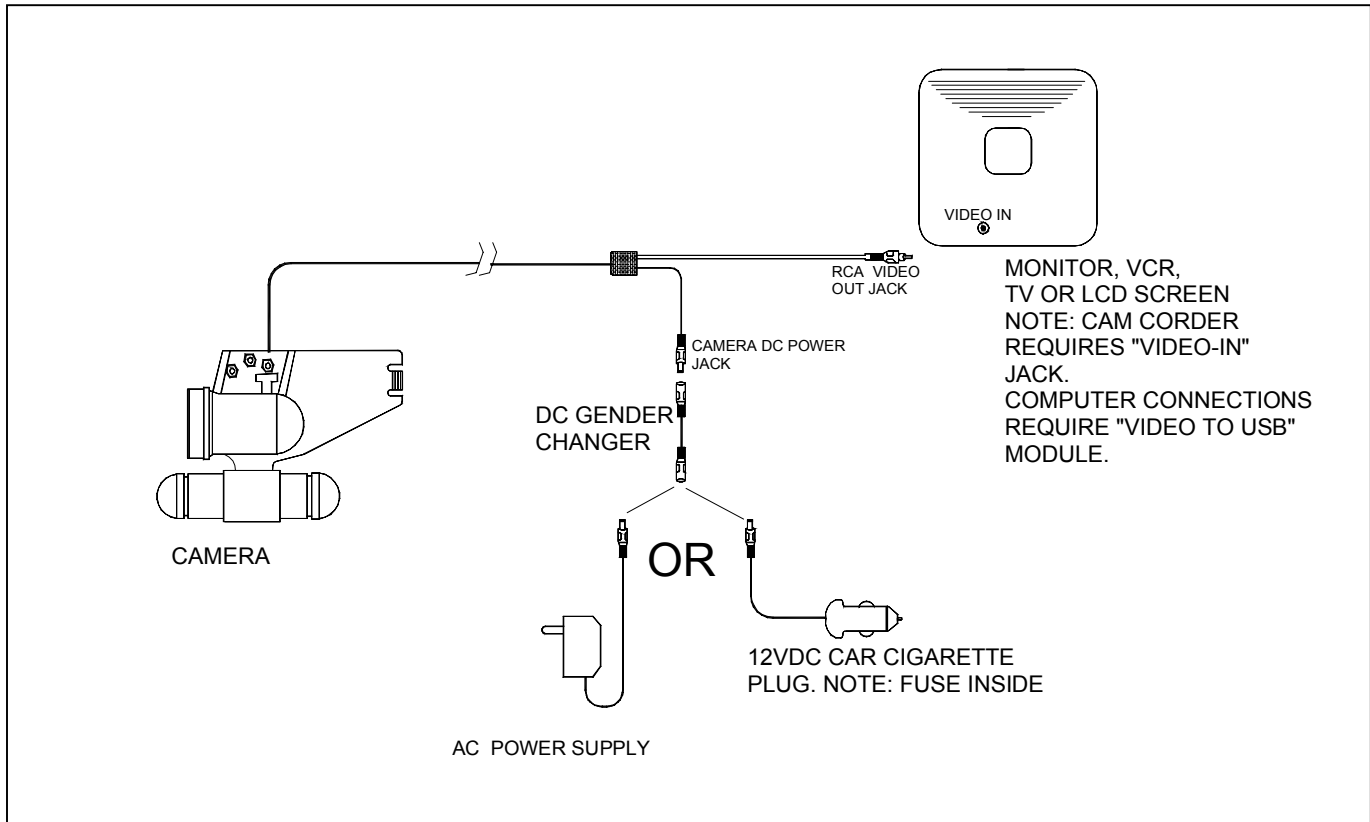
SEA-CAM

UNDER WATER VIDEO CAMERA INSTRUCTION MANUAL



- 1 66 FT OF CABLE
- 2 COLOR WATERPROOF VIDEO CAMERA WITH WHITE LEDs FOR LIGHTING
- 3 REMOVABLE STAINLESS STEEL BALLAST WEIGHT
- 4 RCA VIDEO OUT (YELLOW) CONNECTOR AND PROTECTIVE CAP
- 5 12VDC POWER IN CONNECTOR (BLACK) AND PROTECTIVE CAP

CONNECTIONS FOR CAMERA



1. Camera should not be located to look directly into the sun or bright light source. This will result in poor image quality and eventually damage the camera.
2. Best viewing angle is looking down on objects.
3. Additional lighting may be required if water clarity is poor or in low light conditions.
4. Camera has been tested to working depth of 50 ft. Do not exceed this depth or camera may be damaged.
5. Always wash camera housing and cable in warm water and mild soap to remove salt and other corrosive agents. Use soft cloth or tissue to clean lens. Do not use paper towels. Replace protective vinyl caps on electrical connections. Dry camera and cable before storing in hard case.
6. Do not kink or put knots in camera electrical cable. Use provided velcro straps for lashing cable to boat or dock. Provide chafe protection if cable rubs against hull of boat.
7. Always use appropriate water safety precautions when operating camera. Wear approved life vests.

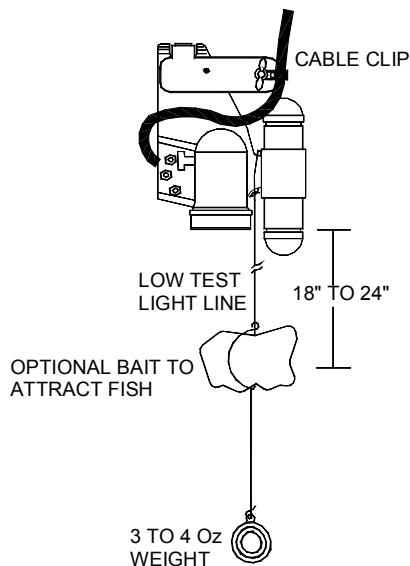
Note: It is the responsibility of the purchaser to use this product ethically and legally. Do not video record persons without their knowledge .

CAMERA SPECIFICATIONS:

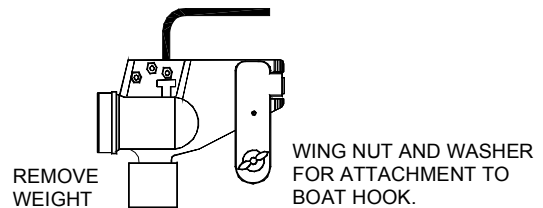
INPUT VOLTAGE:	12VDC NOMINAL, 10.5 TO 13.8
IMAGE SENSOR	1/3" (8.3mm) COLOR CMOS TYPE
PIXEL RESOLUTION	628(H) x 582(V) (EIA) 250,920 PIXELS
ELECTRONIC SHUTTER	1/60 TO 1/1500/SEC
LENS ANGULAR VIEW	60 DEGREE
EFFECTIVE FOCAL LENGTH	18" (45cm) TO INFINITY (UNDER WATER)
VIDEO SIGNAL OUTPUT	1 V(p-p) COMPOSITE VIDEO SIGNAL AT 75 ohm TERMINATION
RESOLUTION	420 TV LINES (H)
POWER CONSUMPTION	1 WATT. (0.08 amps @ 12V) CAMERA AND LEDs
WORKING DEPTH	50 Ft (15.2 meters) MAX.
OPERATION TEMPERATURE	40 F TO 100 F (4C TO 38C)

CAMERA MOUNTING CONFIGURATIONS

CAMERA SET TO LOOK STRAIGHT DOWN



CAMERA ATTACHMENT TO BOAT HOOK



DO NOT PUT KINKS OR KNOTS IN CAMERA CABLE.
USE PROVIDED VELCRO STRAPS TO LASH CAMERA CABLE TO BOAT OR DOCK

BOREL MANUFACTURING INC.
REDWOOD CITY, CA
650 556 1062

EMAIL: BORELMFG@EARTHLINK.NET

WEBSITE: WWW.BORELMFG.COM or WWW.MARINEALARMS.COM

ADDENDUM

SEA-CAM VIDEO OUT CONNECTIONS.

● TV's, VCRs, CAM-RECORDERS

Most on-board TV's will have a Video-in. To connect *SEA-CAM* to a cam-recorder, the recorder must be equipped with a "Video-in". If you do not have an on-board TV, here are the following choices:

1. LCD
Two major types of LCD exist, TFT and STN. TFT is the highest quality with greater viewing angle and is more expensive than STN.
In both cases screen ratio must be 4:3 or adjustable to this ratio.
Price range \$150 to \$450 for 4" to 10" screen size
2. CRT
Small 12VDC CRT TV's range in size from 5" to 10". These TVs will cost half that of a LCD. The disadvantage is their depth of 12" or more.
Price range \$30 (B/W) to \$150 (color)
3. HAND HELD
Hand held TV's range in size from 1.8" to 2.5" screen. These are excellent for inspecting hull using *SEA-CAM* connected to boat-hook.. **Make sure that unit has a "video-in" connection.** Price range \$95 to \$160. Note: these units operate on 6VDC and use four "AA" rechargeable batteries or alkaline

● CONNECTION TO LAPTOPS AND PDAs

SEA-CAM can be connected to a Laptop computer using a Video to USB adapter along with supplied software for capturing pictures or streaming video.

Note streaming video can use over 120 megabytes per min of recording time.

Price range: \$50 to \$99

Suppliers of Video to USB adapters:

[www. hauppauge.com](http://www.hauppauge.com)

USB-LIVE \$49 www. hauppauge.com (tested and recommended)

WINTV-USB Has built-in TV tuner \$99.

For PDA Pocket PCs with color screens Lifeview has a slot card that will allow connection of "video in". This allows capture of still and streaming video. See: www. lifeview.com product name *flygrabber-CF*