

360RIZE

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360SeaDAK Patent Pending

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This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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Introduction

The 360SeaDAK is a professional underwater 360 video camera system utilizing KODAK PIXPRO SP360 4K cameras. With an output resolution up to 6K (6,000 X 3,000) and certified to 130 feet, it is the industry's most versatile and user-friendly solution for underwater 360 video gear for the sport diver.

360RIZE patented underwater camera systems are trusted by the U.S. Navy, NOAA, TIME Magazine, conservationists and award-winning cinematographers for capturing spherical content underwater. Over the course of the past 4 years, 360RIZE underwater spherical video technology has helped hundreds of filmmakers, oceanographers and educators document and share our planet's aquatic environments.

The SeaDAK positions two KODAK PIXPRO SP360 4K cameras in a spherical orientation to capture fully spherical 360 x 180 degree 360 video content utilizing a special designed dome to restore the field of view underwater for camera systems viewing greater than 180 degrees. The individual videos from each camera can then be stitched together using post production software to create 360° videos included with the KODAK PIXPRO SP360 cameras.

Key Features

- Houses two KODAK PIXPRO SP360 4K or action cameras
- Captures fully spherical 360 x 180 degree videos and photos underwater
- 360 video output resolutions up to 6K (6,000 X 3,000)
- Certified to 130 feet - Tested to 230 feet
- External controls for turning cameras on/off and to start/stop recording
- Multiple 3/8" and 1/4"-20 threaded mounting points for camera pole, ROV, dive scooter, and submarine mounting
- Ability to film seamless 360 video both above and underwater

Warranty

LIMITATIONS OF LIABILITY: Normal wear and tear not included: Normal wear and tear is considered on the SeaDAK: Scratched, or cracked domes due to normal use O-rings that need to be replaced

Non-penetrating scratches to the anodized surfaces, bending, or breaking the latch due to the door not being properly installed without charge any product that we, in our sole discretion, find defective in workmanship or material, provided that, on our request, the product is returned to us, and provided that the product has been used only for the purposes intended and has not been modified. This warranty is void in the event of misuse, abuse, unconventional use, or exposure to corrosive or abrasive material or excessive heat. THE FOREGOING IS THE EXCLUSIVE WARRANTY. ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, ARE HEREBY DISCLAIMED. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY 360HEROS OR ITS EMPLOYEES SHALL CREATE A WARRANTY OR MAKE ANY MODIFICATION, EXTENSION OR ADDITION TO THIS WARRANTY. 360HEROS WILL IN NO EVENT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WHATSOEVER, AND OUR LIABILITY, WHETHER ARISING THROUGH CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE, UNDER NO CIRCUMSTANCES WILL EXCEED THE CONTRACT PRICE FOR THE PRODUCT FOR WHICH LIABILITY IS CLAIMED.

Kodak Warranty Assistance is provided by JK Imaging Ltd.

See Camera documentation for Limitation of Warranty

Spare Parts list

Orderable on shop.360rize.com

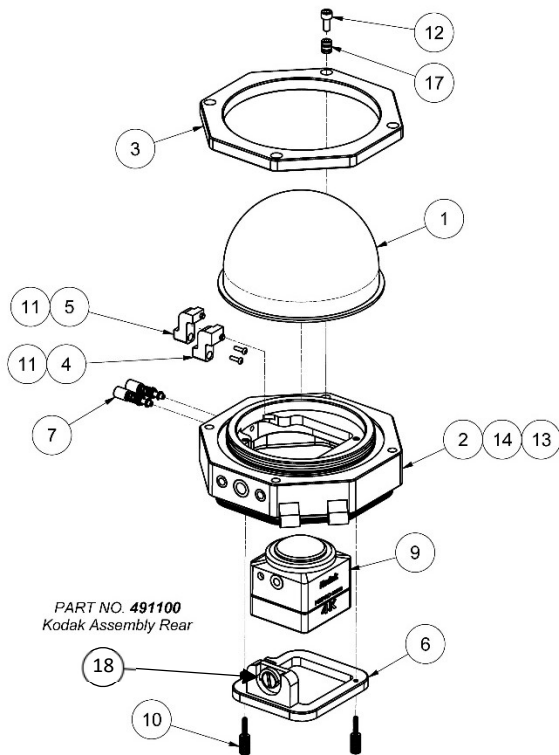
<u>Name</u>	<u>Part #</u>
SeaDAK Door O-Ring (Page	SeaDAK-ORing
SeaDAK Additional Dome (Page 7 – Item 1)	SeaDAK-Dome
Camera Holder Mount Thumb Screws (Page 6 – Item 18)	SeaDAK-ThumbScrew
Camera Mount Eye Screw (Page 7 – Item 9)	SeaDAK-CamScrew

SeaDAK Kit Components



QTY	DESCRIPTION
1	360 SeaDAK Assembly
1	O-Ring Pick
1	Additional O-Ring + O-Ring grease
1	Custom Royal Hard Case with Custom Foam Insert

Assembly and Parts List



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	491004	Dome 0400 w flange
2	1	491007	Sphere Kodak Rear
3	1	491008	Dome Ring
4	1	491021	Actuator Arm A
5	1	491022	Actuator Arm B
6	1	491300	Camera Mount Assy
7	2	491400	Small Button Tapped Assembly
8	2	APEX 4-40-SS Ultrasonic Insert	PEM SS insert for plastic
9	1	Kodak PixPro SP360 Camera	
10	2	MC_91746A112_Knurled Head Thumb Screw 440x500	
11	2	Screw 2 - 56 UNC x 5/16	Hex Socket Button Head Cap Screw
12	4	Screw 8 - 32 UNC x 3/8	Hex Socket Head Cap Screw
13	1	z 491 Dome Oring	2-236-70
14	1	z 491 Door Oring	2-243-70
15	4	z APEX 250 x 20-SS Ultrasonic Insert	SW25020 SS
16	2	z APEX 375 x 16-SS Ultrasonic Insert	SW37516 SS
17	4	z APEX 8-32-SS Ultrasonic Insert	SW832 SS

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Step 9 – You have the option to calibrate your video by using the calibration tool in the top right corner of the program. This will allow you to perfectly align your footage if it is a little off. If you film correctly this should not be a problem. But it is a great tool for fine tuning your video before export into editor.

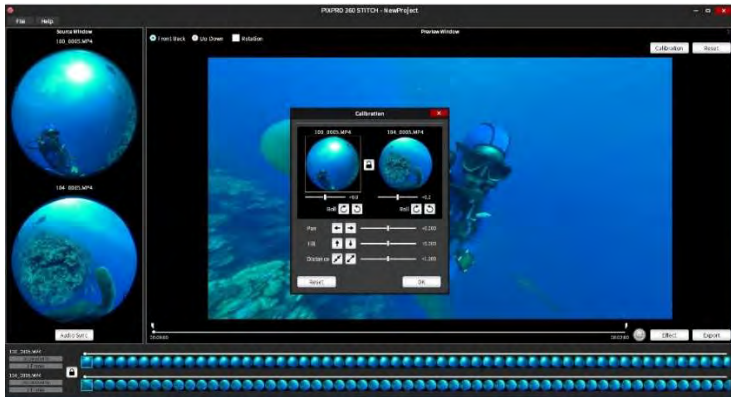
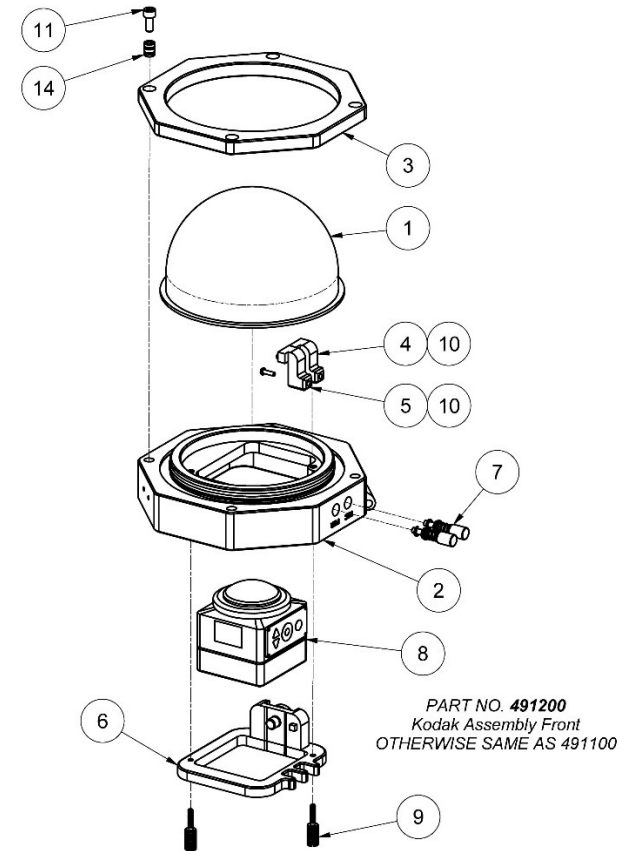
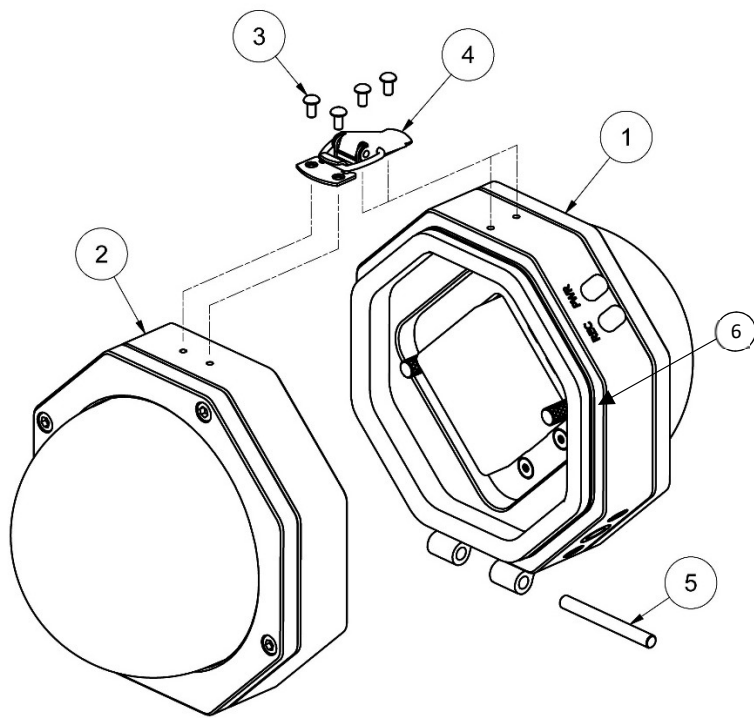


Figure 11- Calibration Option Align and Edit Footage

Step 10 –Export your 360 Video file using the export button in the Bottom Right corner of software.



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	491004	Dome 0400 w flange
2	1	491006	Sphere Kodak Front
3	1	491008	Dome Ring
4	1	491021	Actuator Arm A
5	1	491022	Actuator Arm B
6	1	491300	Camera Mount Assy
7	2	491400	Small Button Tapped Assembly
8	1	Kodak PixPro SP360 Camera	
9	2	MC_91746A832_Knurled Head Thumb Screw 440x500 Slotted	
10	2	Screw 2 - 56 UNC x 5/16	Hex Socket Head Cap Screw
11	4	Screw 8 - 32 UNC x 3/8	Hex Socket Head Cap Screw
12	1	z 491 Dome Oring	2-236-70
13	2	z APEX 4-40-SS Ultrasonic Insert	SW440 SS
14	4	z APEX 8-32-SS Ultrasonic Insert	SW832 SS



PART NO. 491000
Kodak Top Assembly

PARTS LIST				
ITEM	QTY	REV	PART NUMBER	DESCRIPTION
1	1	2	491100	Kodak Assembly Rear
2	1	2	491200	Kodak Assembly Front
3	4		APEX M3-x6 PT PlastiSeal Phil Pan SS Screw	
4	1	-	MC_6082A12	Draw Latch SS
5	1	-	MC_97395A617	Dowel_Pin_1875x1750

Step 6 – In top left corner of software select FILE > Open

Step 7 – Import your Files from Camera A and Camera B shown in Figure 9



Figure 9 Import your files from Camera A and B

Step 8 – Stitch will automatically stitch your footage together shown in Figure 10

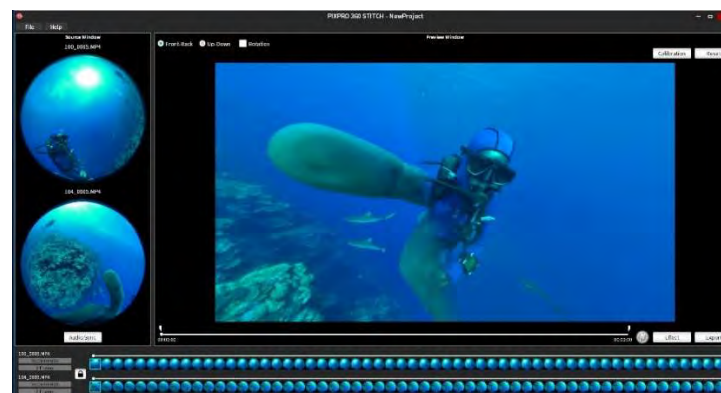


Figure 10 Auto Stitching Content

PixPro 360 Stitch Software

Step 1 – Access

<https://kodakpixpro.com/Americas/support/downloads/>

Step 2 – Click on the far-right tab for PixPro software downloads

Step 3 – Shown in Figure 7 Download PixPro SP360/SP360 4k Stitch Software for your Desktop

Step 4 – Run Installer (in most cases this will start automatically if not right click and select Run)



Figure 7 Kodak Download Page <https://kodakpixpro.com/Americas/support/downloads/>

Step 5 – Open Software

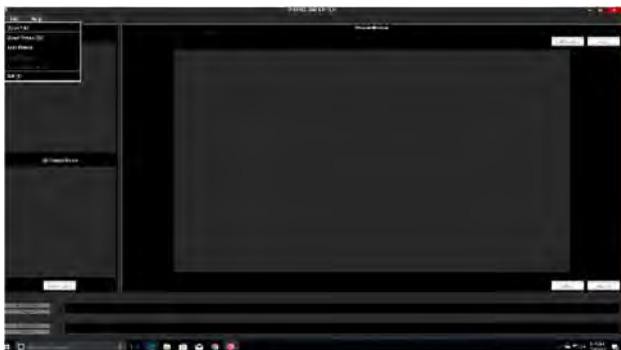


Figure 8 Open Software after installing

Overview

Your SeaDAK has been shipped unlatched to avoid pressure strain during shipping. We recommend you unlatch or leave latch loose during transport.

For more videos and information on the SeaDAK, please go to

<https://www.360rize.com/category/360seadak/>



To see a full assembly of the SeaDAK, you can watch here:

<https://www.youtube.com/watch?v=y5TWIb5xiK0>



Installing Cameras

The SeaDAK underwater housing has an easy to install mounting system for two Kodak PixPro 360 cameras.



Figure 1 Entire SeaDAK Assembly

STEP 1: Shown in Figure 2 be sure to have the camera mount base and the 1/4-20 camera mount d ring screw. Notice that there are two seals included on the camera mount screw to ensure a snug and stable camera inside of the mount base.



Figure 2 Camera Holding Mount

INCORRECT Holding Positions

Left Hand flipped No Front
WRONG



Left hand MOUNT RIGHT
WRONG No Front



Right Hand Flipped WRONG
No Front



Right Hand Side No Front
WRONG



Note: Position of the monopole in all images is in front of the Diver and not to the side for best stitching. This means the diver will be on the stitch seam.



Left Hand WRONG
No Front

Understanding Mounting and Holding Positions

CORRECT Left or Right Handed holding positions

Note: Position of the 3/8 and 1/4 " holes. They need to go inside vs outside. This keeps the Diver away from the stitch seam. **ALWAYS Hold the unit with the domes side to side. For best exposure.**



INCORRECT Holding Positions



STEP 2: The camera will appear as Figure 3 suggests. Twist the D ring screw until tight. Fold ring up flush with screw head.



Figure 3 Kodak Installed in Mount Assembly

STEP 3: Insert camera as in Figure 4 and mount assembly inside of the SeaDAK housing making sure that the mount lines up over the actuator arms for the external control buttons.



Figure 4 Install Camera and Mount into Holder

STEP 4: After lining up the mount assembly into the housing, insert the two thumb screws as in Figure 5 to secure the cameras inside the housing. Turn until tight.



Figure 5 Insert thumb screws to hold camera mount assembly

STEP 5: Once the cameras are secured with the thumb screws as in Figure 5, the SeaDAK can then be closed. **MAKE SURE** the O-Ring is properly seated in the O-Ring slot. So when closing the housing as in Figure 6, the O-Ring is not pinched in the door closing assembly.



Figure 6 Properly seated O-Ring - Latching the housing

Kodak Camera Settings

To properly record in your SeaDAK rig, be sure both cameras are set 2K by 2K, White Balance - Auto, Video Mode. Tip: Use Gaff or 'other' tape to cover camera light while recording.

When using the SeaDAK Underwater Rig,
your camera settings should be set as
shown in the table below



