

Mako Video Housing Instructions

I. Introduction

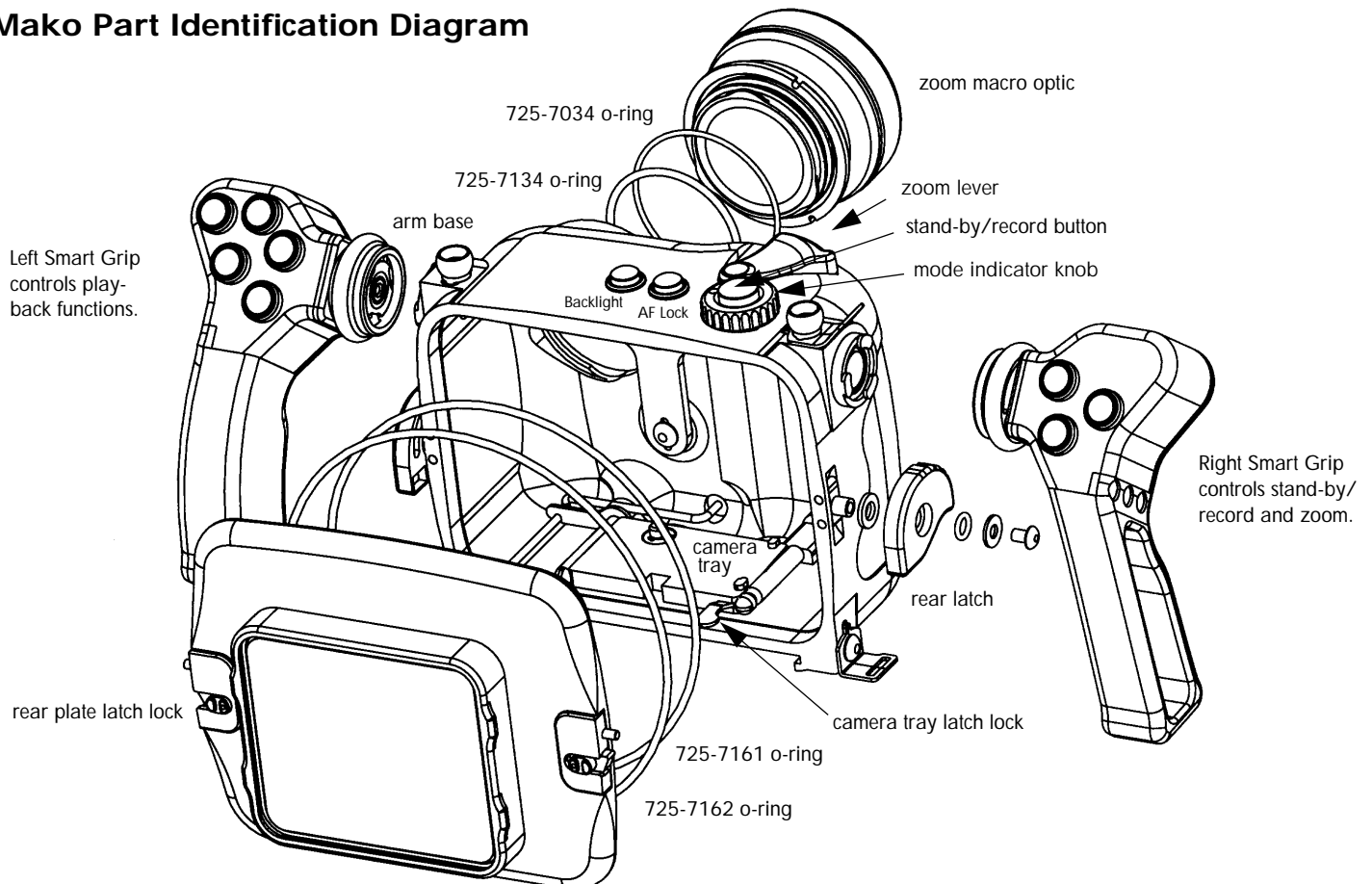
Congratulations on your decision to purchase the latest state of the art underwater video housing from LMI. The all new Mako housing for the Sony DCR SC100 is the smallest, most compact full featured video housing available.

Each housing is hand finished by LMI technicians so some beauty marks may be apparent. However, you can rest assured that the utmost care was taken in the machining, assembly, and testing of our newest line of housings.

Please take a few moments to read the enclosed instructions thoroughly. Following the steps outlined below before every dive will help ensure proper operation of your SC100 camera in your Mako housing. Failure to do so can jeopardize the integrity of the housing, and/or damage your camera.



Mako Part Identification Diagram



Mako Video Housing Instructions

II. Preparing the Camera

1. Install a charged NPF530 battery into camera.
2. Install a tape into camera.
3. Switch camera into off position.

III. Installing camera into Mako housing

1. Remove rear plate by simultaneously sliding latch locks (located on rear plate) towards center of housing and rotating rear latches away from housing. Rear plate will disengage and separate from housing. (see figure #1)
2. Remove camera tray by sliding stainless steel lock lever towards center of housing and pulling back on tray.
3. Mount camera tray to base of camera by aligning foot print to details. Fully tighten camera tray screw into tripod mount. Lock lever should face rear of camera. Press the tray against the bottom of the camera to make sure it is flat and fully seated.
4. Before installing camera into housing, rotate large mode indicator knob on top of housing to the load/unload position. Additionally, center zoom lever (black foot on top of housing) to the middle detent position. Failure to do so will interfere with camera installation.
5. Pull rubber cover away from the left side of camera to expose red microphone jack. Route housing microphone cable over the top of and inside the rubber cover and plug into appropriate jack. (If routed correctly, the rubber cover will help secure microphone cable into the jack). (see figure #2) Make sure camera hand strap is open, flat and as flush as possible to side of camera. (see figure #3)
6. Align camera tray with stainless steel guide pins in housing base. Slide camera into housing by pushing from the bottom until lock lever clicks into the locked position (make sure the camera strap remains flat and the microphone cable remains in the jack). (see figure #3)
7. Check for correct mechanical alignment and operation of mode indicator knob. Rotate mode indicator knob on housing to the photo

position ("photo" icon should appear in viewing screen). Rotate mode indicator knob to the cam position ("photo" icon should disappear). If you have any difficulties, repeat step 3, making sure that the camera tray is flat and fully seated to the base of the camera.

IV. Installing rear plate

1. Set housing in the upright position and rotate rear latches so that the flat side of the latches are parallel to housing back and cut outs are located at the bottom. (see figure #3)
2. Make sure o-rings are lubricated.
3. Press rear plate on to housing back evenly (position viewing window along bottom edge of housing).
4. Rotate rear latches toward the front of the housing until latch locks slide into the locked position.
5. Make sure o-rings seat evenly. Check the gap between the rear plate and the main housing. It should be even on all sides with no foreign matter or protruding o-rings visible. If not lubricated properly and compressed evenly, the o-ring can walk out of the groove and pinch.

V. Testing for correct mechanical alignment and operation

1. **After** installing the rear plate, check for correct mechanical alignment and operation between camera and housing.
2. Rotate mode indicator knob (on housing) to the photo position ("photo" icon should appear on viewing screen). Please note that while the mode indicator knob references the current camera position, there are some tolerance differences between individual cameras and housings. Your best reference for camera mode verification are the icons in the viewing screen.
3. Depress red stand-by/record button to verify capture mode.



figure #1



figure #2



figure #3

4. Rotate mode indicator knob to the cam position ("photo" icon should disappear)
5. Depress red button to verify record/standby mode.
6. Depress A/F button to verify focus lock ("F" icon should appear on viewing screen).
7. Depress backlight button to verify backlight control ("sun" icon should appear on viewing screen).
8. Slide zoom lever left to verify zoom wide, and right to verify zoom telephoto (after verification, leave in middle detent position).

VI. Installing Smart Grip Handles

1. Remove rubber covers from smart grip mounts on either side of housing (don't lose them).
2. Remove hand strap if attached.
3. Position Smart Grip handle in your hand so that the buttons face skyward. Align handle details with housing mount details. Press in and rotate downward until handle is parallel and black locking sleeve clicks into position. (see figure #4) To remove, pull locking sleeve away from housing and reverse the above procedure. (Although watertight, please do not install or remove Smart Grips below the surface. Doing so will interfere with the led transmission)
4. Right Smart grip controls telephoto, wide, record and standby.
5. Left Smart grip controls rewind, fast forward, play, pause and stop (mode indicator knob must be in VTR position to access these functions)

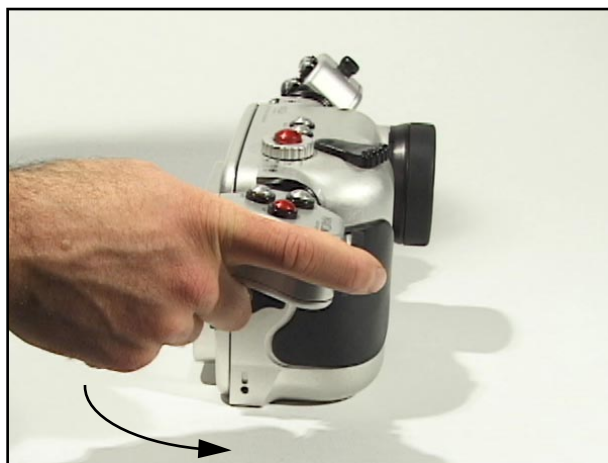


figure #4

Note: All mechanical controls override Smart Grip controls. Therefore, make sure zoom lever is in the middle detent position when using Smart Grips.

VII. Flip filter operation

1. Move switch down to engage filter.
2. Move switch up to disengage filter.

VIII. Front bayonet port removal/installation

1. To remove port, slide black locking latch pin toward housing, rotate port clockwise and pull away. (see figure #5)
2. To install port, align bayonet details, press in and rotate port counter clockwise. Black locking latch pin will slide into the locked position when port engages correctly.



figure #5

IX. Removing camera from housing

WARNING: Before removing camera make sure you and your housing are dry!!

1. Rotate mode indicator knob into the load/unload position (camera will be in VTR mode, as noted by the blue screen).
2. Slide latch locks toward the center of the housing and rotate rear latches away from housing (rear plate will disengage).
3. With rear plate removed, reach into housing and turn camera switch to off position.

If rear plate is difficult to remove, there may be an internal vacuum created by a change in atmospheric pressure. If this is the case, remove the front optic first to equalize the pressure then remove the rear plate normally. Do not force the rear plate by using the latches.

4. Flip Sony viewing screen up to expose camera tray lock lever.
5. Slide the lock lever toward the center of the housing and gently pull camera from the housing.

REMINDER: Don't forget to UNPLUG MIC CABLE!

7. Replace rear plate and store housing appropriately, preferably in Light & Motion Travel case.

IMPORTANT NOTE: All Light & Motion Industries products are individually tested to 200 feet before leaving the factory. In light of shipping and handling, we recommend testing your housing in water without a camera prior to use.

X. Pre-dive checklist- If you have read the previous set up instructions, you should be ready to go. If you didn't, go back and read them now.

1. Make sure you have a tape in the camera.
2. Make sure you have a completely charged battery in the camera.
3. Verify operation of all housing controls.
4. Check that the front bayonet port is securely engaged and that the latch pin is in the locked position.
5. Check that the rear plate o-rings are seated correctly and that the rear latch locks are in the locked position.

XI. Post dive cleaning

1. After each dive, you should dunk the housing in fresh water, depress all of the push buttons, rotate the mode indicator, and actuate the zoom lever. The objective, is to flush all of the salt water out of any switch, button or lever that was used during the previous dive.
2. After you are geared down and completely dried off, simply towel dry the housing in a safe dry place.

Warning: Do not leave your housing in the rinse bucket with other housings and cameras. Housings have been known to flood by jostling against other products.

XII. O-ring care & maintenance

1. The sealing system used on the rear plate incorporates two o-rings. This is the most critical area of the housing for maintenance and should be inspected before every dive.
2. Make sure the rear plate o-rings and the mating surface on the inside of the main housing are clean from grit, hair, lint and anything that could potentially breach the o-ring seal.
3. After frequent diving or if o-rings or grooves appear dirty, remove o-rings and clean the grooves. To remove o-rings, use finger pressure or the rounded edge of a plastic part to lift the o-ring out of the groove. Clean the groove with a lint free swab (available at most camera stores) or the folded edge of a paper towel.
4. If o-rings are dirty, it is best to replace them. Washing dirty o-rings with soap and water is not recommended. Soap breaks down the lubricants used in most o-ring grease and unless completely removed from the o-ring could damage the integrity of the seal.
5. Properly greased o-rings will help maintain sealing integrity and minimize o-ring degradation. Use enough grease to lubricate the o-ring thoroughly, but not so much as to attract additional debris.
6. We highly recommend replacing o-rings at least once a year.
7. All of the front optic ports for the Mako housing also utilize two o-ring seals. These seals should also be checked on a regular basis and cared for in the same manner that you care for the rear plate o-rings.

XIII. Returning products for care

1. We highly recommend a factory service of mechanical controls once a year.
2. Before returning your LMI product for care, please call or email our service department for a return number.
3. Ship your product pre-paid freight with the return number printed on the outside of the box. It is recommended that you keep your shipper's tracking number until the product is returned to you.

Warning: Do not ship your camera inside a Mako. Shipping companies may drop your system from up to chest height which could damage your camera.