

# LK-92 RELEASE LINK - SubSeaSonics

## (USED WITH AR-50-AA Acoustic Release)

(Revised Nov. 29, 2012) (file = LK-92\_DATA\_SHEET)

Description: Heavy load Release Link for use with the AR-50-AA acoustic release made more robust with two hoops of stainless steel wire in place of one. The use of stainless steel wire has been discontinued due to two recently discovered failures out of 1000 deployments. The problem is premature hoop erosion due to 'crevice corrosion'. Accordingly, all new AR-50-AA link needs will be met with a new LK-94-NI link made with a proprietary 60% nickel wire. It will take twice as long to erode as the LK-92. Alternatively, the single hoop LK-81-NI can be used in place of the LK-92 which will handle less load but be faster.

LK-92 Load limit: 90 lb (41 kg) plus a 40 lb surge.

Hoop sizes: Large enough to pass a 1/8 inch diameter line through both together.

Wire metal: Stainless steel alloy 316L.

Use: Replaceable release link for use with AR-50-AA acoustic release.

Method of release: Electrolytic erosion of metal at exposed points.

Hoop construction wire diameter (excluding paint): 0.035 inch (0.89 mm).

The following table shows approximate release erosion times with 9 Energizer L91 lithium AA batteries wired in series and installed internal to the AR-50-AA. (A lithium battery pack made by Sub Sea Sonics is recommended. p/n BAT-50-AA-L91):

HOOP PAINT SCRAPED OFF - WORST CASE (Lithium batteries)	HOOP PAINT INTACT (Lithium batteries)
10 minute @ 21°C (70°F) 15 minute @ 5°C (41°F) 20 minute @ 0°C (32°F)	5 minute @ 21°C (70°F) 8 minute @ 5°C (41°F) 10 minute @ 0°C (32°F)

Release erosion time with 9 **alkaline** AA batteries in place of lithium's: Up to three times as long.

Battery "energy" used per release for worst case of all paint scraped off: 200 mA-Hr. One set of 9 lithium batteries should last 1.0 year including 7 releases or 0.5 year including 11 releases.

Reference Information: Lithium battery capacity = 3000 mA-Hr. Maximum battery current while ON and listening for a command equals 0.220 mA.