Portable LL916C/H Underwater Speaker Instructions

AMPLIFIER, TRANSFORMER, AND POWER REQUIREMENTS:

1. CAUTION: For reasons of safety, an AC operated amplifier used with an underwater speaker must meet the following minimum requirements: 1) UL or ETL label on the rear panel, 2) Grounded 3-prong power cord, 3) Proper output rating (wattage & ohms) to match Lubell transformer box rating, 4) Class AB output circuitry for stability. The amplifier must be used in a dry area at least 10' away from the pool, and must be connected to a GFCI protected AC outlet having "test/reset" buttons only.
2. CAUTION: For reasons of swimmer safety and proper amplifier operation, the Lubell underwater speaker must be used with the correct Lubell Isolation Transformer Box. The Lubell LL916C (cage mount) and LL916H (nylon harness) underwater speakers are rated at **20 volts rms** maximum, and are fitted with a special 3-pin connector that connects to mating connector on Lubell transformer boxes. Do not exceed wattage rating printed on the Lubell transformer box label as this is unsafe and will likely burn out the underwater speaker and/or the amplifier.

USE THE APPROPRIATE TRANSFORMER BOX:

Please call us for assistance in choosing the correct transformer, speaker, and amp for your application.

AC102C: For connection to **SPEAKER OUT** connector on UL listed powered mixers and power amplifiers up to 200 watts @ 8 ohms (40 Vrms) per channel. Lowers voltage to 20 volt rating of speaker.

AC202C: Included with the StageMan amplifier (part of CAWSS System), or for connection to Lubell approved amplifiers rated up to 50 watts @ 8 ohms, or 100 watts @ 4 ohms (20 Vrms). 1/4" mono phone jack input.

AC205B: Included with the Lubell 9484, screw terminal I/O for permanent installations. Or can be supplied with the Lubell OP1 jack plate for semi-permanent installations utilizing outlet box.

AC205C: For connection to the Peavey PVi4B powered mixer, or to other UL or ETL listed commercial sound amplifiers rated up to (but not exceeding) 78 watts rms @ 8 ohms (25 Vrms). Also compatible with 25V constant-voltage amplfiers -- allow 37.5 watts power consumption for each LL916 / AC205C connected in parallel. Use Bosch PLE-1P120-US amplifier or PLE-2MA120-US powered mixer for 1-3 speakers, and PLE-1P240-US amplifier or PLE-2MA240-US powered mixer for 4-6 speakers.

AC203E Circuit Master: Included with the LL916 Basic System, or for connection to the 8 ohm output of UL listed powered mixers up to 78 watts per channel @ 8 ohms (25 Vrms). Has one 3-pin underwater speaker output jack for Lubell LL916C/H, and one 8 ohm air speaker output jack (1/4") with volume control for connection to the EV ZX1 air speaker. Set volume of underwater speaker using amplifier master volume control, then set volume of air speaker using control on box.

AC211 Circuit Master: For connection to the 8 ohm output of UL listed powered mixers up to 200 watts per channel @ 8 ohms (40 Vrms). Has one 3-pin underwater speaker output jack for Lubell LL916C/H,and one 8 ohm air speaker output jack (1/4") with volume control for connection to the EV ZX1 air speaker. Set volume of underwater speaker using amplifier master volume control, then set volume of air speaker using control on box.

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SETTING UP SYSTEM:

It is important for the Sound Engineer to read this guide and all equipment manuals before using equipment.

1. Equipment operator should wear dry rubber soled shoes while setting up and operating equipment.
2. Inspect all speaker cables and power cables before, during, and after each use. If cable or speaker coating becomes damaged, return to Lubell Labs for service before using equipment. Do not attempt self-repair of cords or equipment -- return to manufacturer for factory service only. Use a cord protector over exposed cords to help prevent any damage or tripping.
3. Set up wooden or plastic equipment table in dry area only, a minimum distance of 10' from the water. Table typically located at deep end corner of natatorium. Keep all electronic equipment (amplifier, CD/tape players, etc.) on this table. Connect all AC power cords to a audio grade power strip. Connect power strip to GFCI outlet only; Test outlet before each use.
4. Attach a rope to the LL916 cage, or to the stainless steel link on the LL916H underwater speaker harness. Do not lift the underwater speaker by the speaker cable, or drop the underwater speaker, as this will result in non-warranty damage.
5. Place the underwater speaker on a towel on the pool deck. Carefully unwind the cable in a straight line, avoiding any kinks. Rewind cable around cage in a similar manner.
6. When placing the underwater speaker in the water, make sure the connector stays dry, and that the speaker and cord is not scraped against the pool or the deck. Using the rope, lower the underwater speaker to a minimum depth of 6' -15' (1.83 -4.57 meters); Tie rope to gutter hook or place caged speaker on pool bottom.
7. Connect 3-pin connector on end of LL916C/H underwater speaker cord to mating 3-socket connector on transformer box (located on equipment table). Lubell OP1 wall plate coding: White=(+), Black=(-), Green=Ground. Cover cord with cord protector to prevent tripping over cord.
8. Connect input **AMP** side of Lubell transformer box to amplifier per guide on previous page.
9. Do not dive in vicinity of underwater speaker. Keep swimmers a minimum distance of 6' away from the speaker during use. Avoid excessive sound levels and feedback.
10. Always vacate the water during inclement weather and lightning storms.