

PRODUCT SUPPORT MANUAL

Y1-03-0139
Rev. B



RCL-600A

Product No. 1941 & 1943

Remote Control Searchlight
with Joystick Remote
Control Panel

ACR Electronics, Inc.
5757 Ravenswood Road
Fort Lauderdale, FL 33312
+1(954) 981-3333 • Fax +1 (954) 983-5087
www.acrelectronics.com
Email: Info@acrelectronics.com

A **Chelton Group** company

TABLE OF CONTENTS

1.0 GENERAL.....	2
2.0 RCL-600A SPECIFICATIONS.....	2
3.0 INSTALLATION AND OPERATION INSTRUCTIONS.....	3
3.1 WIRING OF UNIT.....	3
3.2 REMOTE CONTROL PANEL (MASTER).....	4
3.3 WIRING OF REMOTE CONTROL PANEL.....	5
3.4 SEARCHLIGHT UNIT.....	5
3.6 INSTRUCTIONS ON CONTROLS.....	8

1.0 General

The **RCL-600A** was specially designed for mariners who require a high intensity remote controlled searchlight that can stand up to the tough marine environment.

The **RCL-600A** is a xenon arc searchlight that produces 6 million peak candle power. All functions of the **RCL-600A** can be electrically operated by remote control from the pilot area of the vessel. A remote control panel is supplied with the **RCL-600A**. An optional slave remote control panel is available (ACR Product No. 1942).

The sleek design and modern construction of the searchlight body makes it attractive for recreational and commercial vessels. The searchlight is totally enclosed and is made of rugged aluminum alloy. It is gasketed and finished to be resistant to the weather.

2.0 RCL-600A Specifications

Lamp Housing	Aluminum Alloy Die Casting
Base	Aluminum Alloy Die Casting
Power Source	DC 12 – 15V/DC 21.6 – 26.4 V
Reflector	High quality parabolic glass
Lamp	150W Xenon short arc lamp
Peak beam candle power	6,000,000 CD
Beam Spread	About 1°
Operation Method	Electric Remote Control
Elevation Angle	Up 18°, Down 30°
Turning Angle	360° (Continuous)
Elevation Speed	About 7.5°/sec.
Turning Speed	Low about 11°sec., High about 27° sec.

3.0 Installation and Operation Instructions

3.1 Wiring of Unit

The **RCL-600A** Remote Control Searchlight consists of Searchlight Unit and Master Remote Control Panel. The user must supply the cable and/or wire to power the unit. The source must be a fused 12 VDC, 20 Amp supply (or 24 VDC, 10 Amp supply). This cable is to be attached to the Searchlight as shown in the connection diagram, Figure 1. Observe polarities when attaching wires!

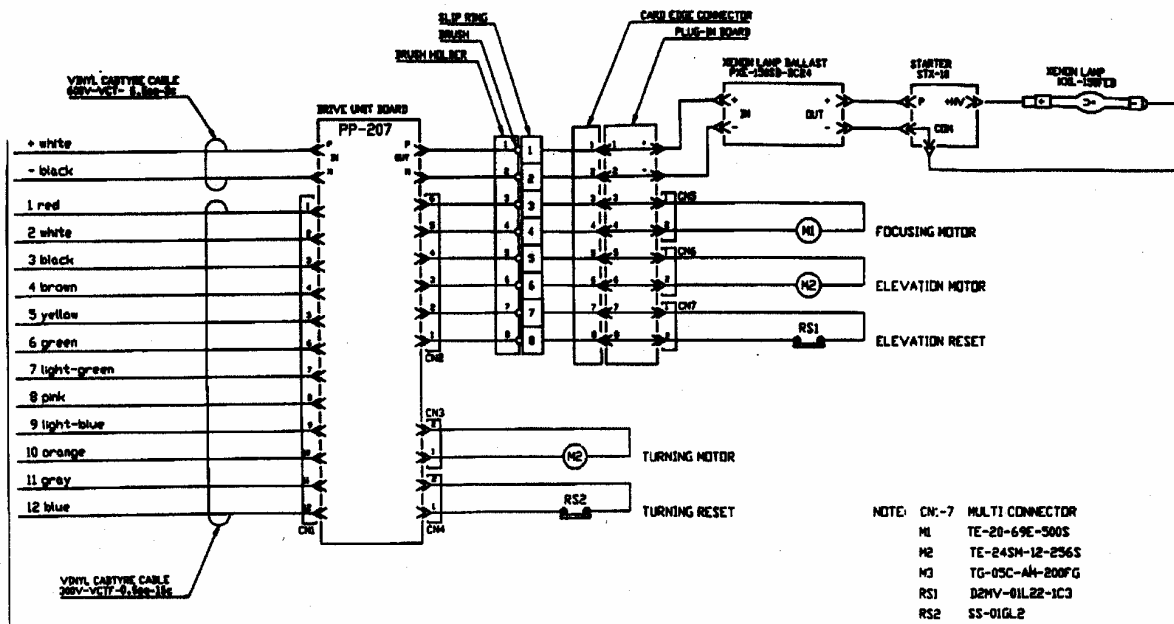


FIGURE 1

3.3 Wiring of Remote Control Panel (see Figure 3)

The Remote Control Panel is received with a 6-foot long, 20 AWG cable. The cable will already be attached to the searchlight and should be connected to the remote control panel connector to row.

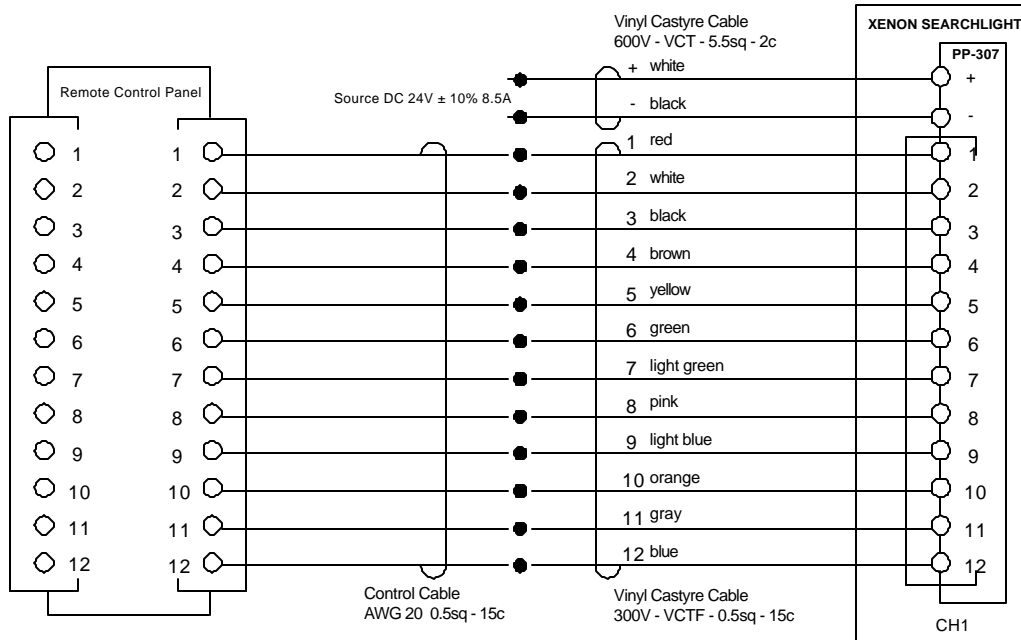


FIGURE 3

3.4 Searchlight Unit

The Searchlight Unit can be mounted where desired, using appropriate length 3/8", stainless steel fasteners. Keep navigational aids / GPS antennas out of the beam path of the light. It is recommended to mount antenna 10 feet behind the light minimum. Be sure the 4 nylon shoulder washers, supplied in Kit No. A3-06-1958 have been inserted in the searchlight base mounting holes to prevent a galvanic reaction between the mounting hardware and the base of the searchlight, and also that the mounting base gasket is securely in place before bolting down. Silicone grease should be applied to the bottom of the gasket to help in waterproofing the unit. When mounting, be sure that the unit is able to rotate 360° without hitting any obstructions. Refer to Figure 4 for mounting details. Mount unit so that the ID label on mounting base faces forward. This is the home position when light is reset. (See instructions on controls) **CAUTION: The searchlight is not designed for inverted mounting.**

CAUTION: Xenon-Arc lights emit electromagnet radiation, which may interfere with some communication or navigation systems mounted on board.

The preferred location for communication and navigation equipment systems antenna is at least 3 meters directly above the light.

After the light is installed, all critical communication and navigation systems should be checked for proper operation with the light turned ON and rotated all around.

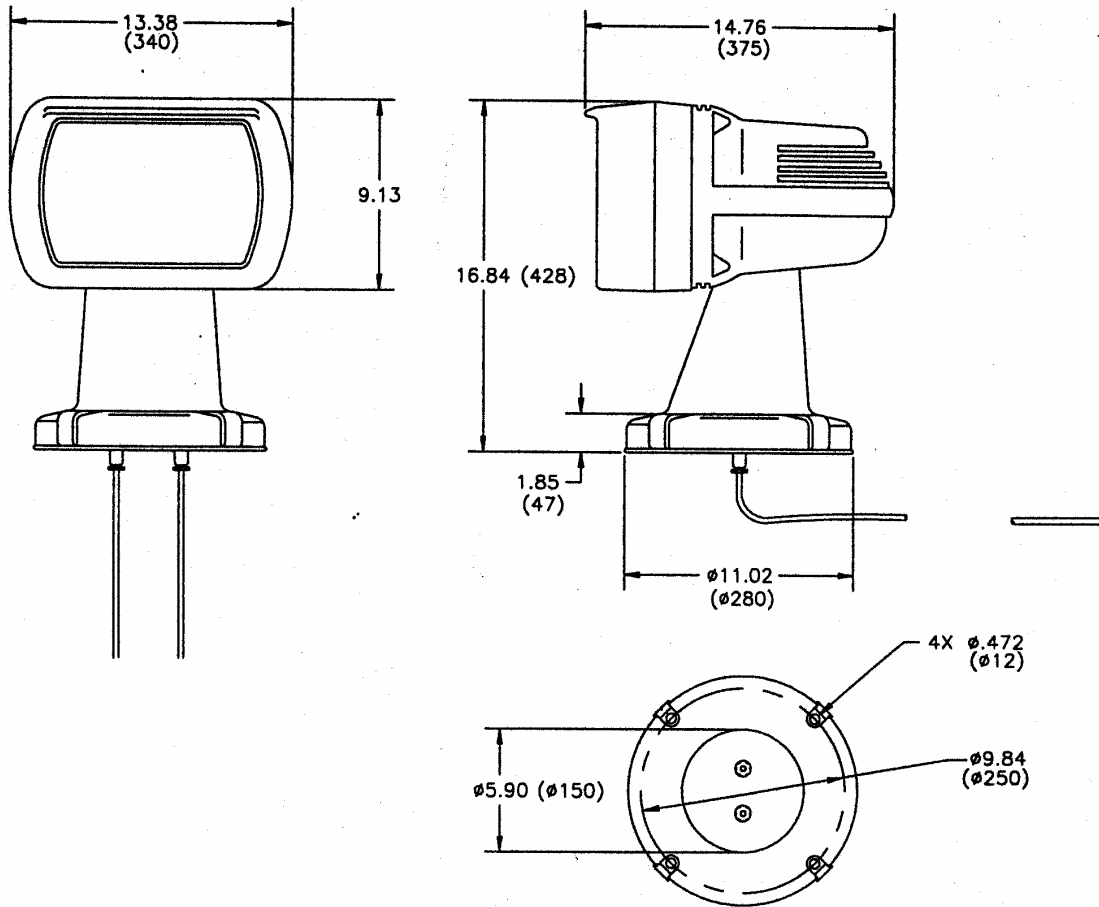


FIGURE 4

3.5 Second Remote Control Panel (Slave) – optional (Product No. 1942)

The second Remote Control Panel may be mounted similar to the first. The second remote control panel is wired parallel to the first remote control panel. Connect cable to sockets on back of control panels. Master panel should have cable plugged into top socket row 2; slave panel should have cable plugged into bottom socket row 1 (refer to Figure 5).

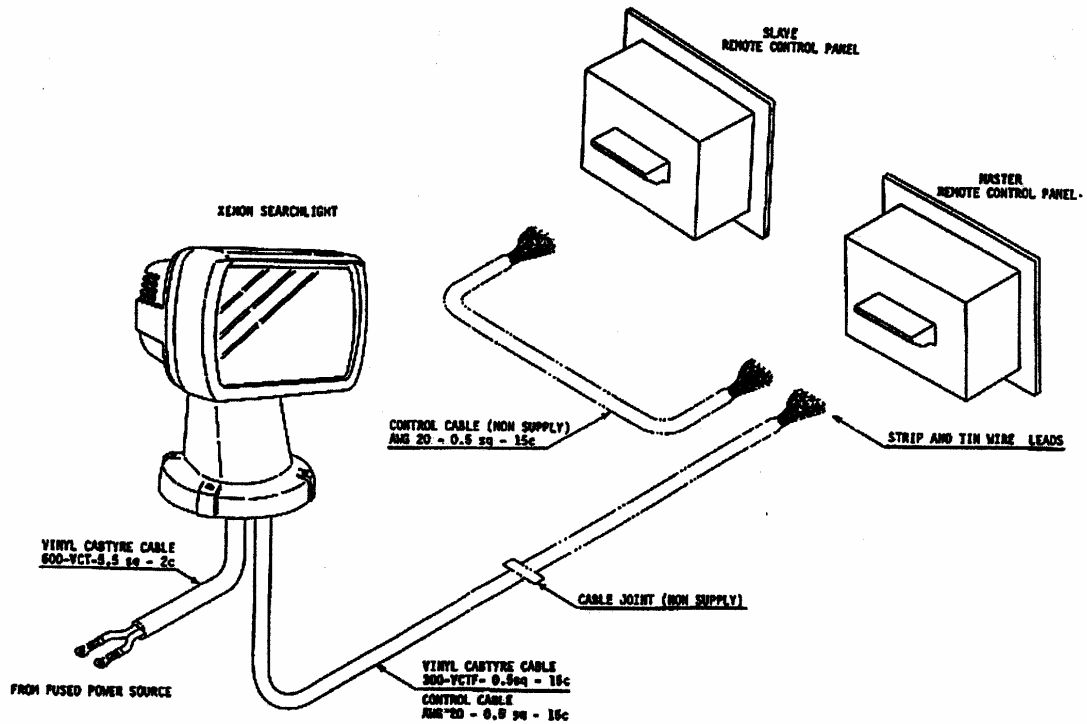


FIGURE 5

3.6 Instructions on Controls

Rotation –

Up/Down/Left/Right

Move joy stick in the desired direction.

Low Speed Range

0° to 7.5°

High Speed Range

7.5° to 15°

Focus - Rotate focusing knob for desired light spot size (wide or narrow)

Operation of CPF99 Control Panel

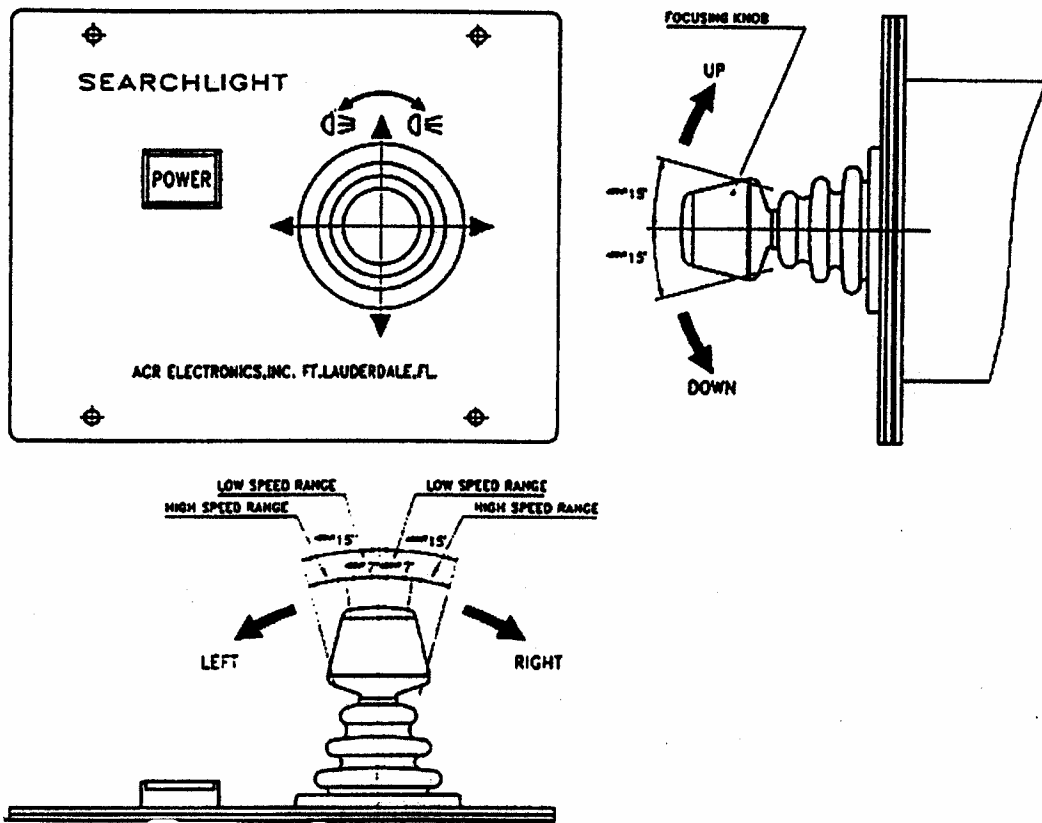


FIGURE 6

3.7 Bulb Replacement (see Figure 7)

A 150W xenon short arc lamp is provided with your **RCL-600A**. If it should need replacement, it must be ordered through ACR Electronics, Inc., by P/N A1-14-0093.

To replace the lamps:

Warning: Do NOT touch glass or parabolic reflectors with fingers or tools! Use cloth gloves.

1. Disconnect unit from power source and allow to cool.
2. Remove four screws holding front flange and glass with provided 6mm hex wrench.
3. Loosen mounting collar of lamp by turning collar counter clockwise. Unhook wire from opposite end of lamp. Pull lamp out of mounting collar. Installation is done in reverse order.
4. Replace front flange and glass and install the four retaining screws. Be sure gasket is securely in place.
5. Reconnect unit to power source.

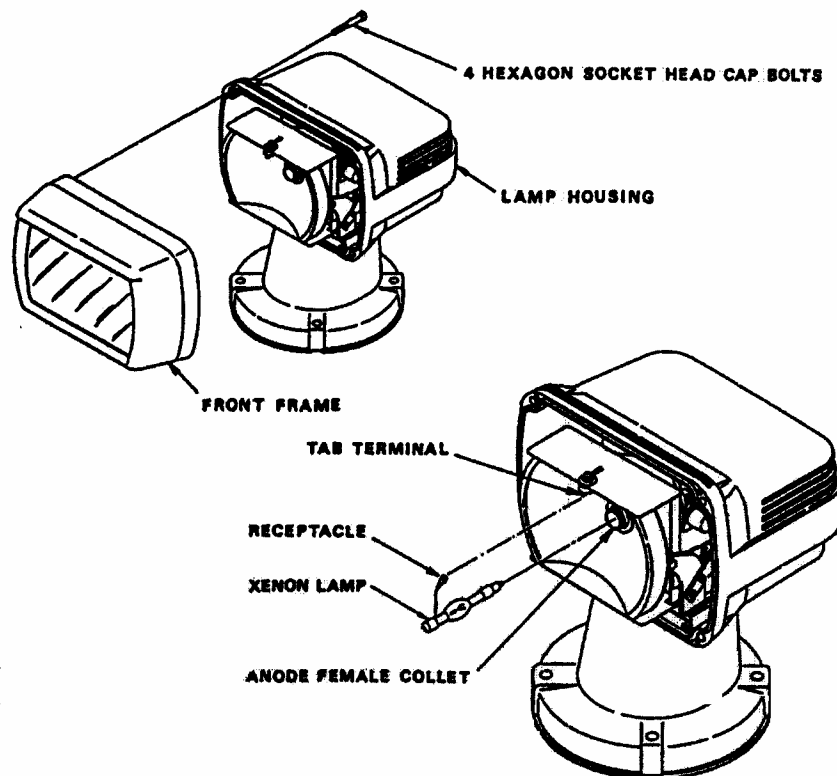


FIGURE 7

Warning: Turn OFF the power witch when installing lamp.

1. Loosen the four (4) hexagon socket head cap bolts by using the attached hexagon wrench and take the front frame off from lamp housing.
2. Turn the anode female collet counterclockwise to loosen the anode male collet.
3. Take the xenon lamp out of the case. Hold the cathode side (-) before you and insert the anode side (+) into the anode male collet securely.
4. Turn the female collet clockwise to tighten the lamp.
5. Insert the receptacle into the tab terminal securely.
6. Install the front frame with four (4) bolts.

Caution: If you handle the xenon lamp with dirty hands, wipe off the stain on the glass with alcohol.

CONNECTION DIAGRAM, RCL-600A/12V

Table 1

*	Source cable size	
	0 – 30 ft run:	AWG 12
	30 – 50 ft run:	AWG 8
	50 – 100 ft run:	AWG 6
**	Control cable size	
	0 – 100 ft run:	AWG 16
***	Remote panels cable size	
	0 – 100 ft run:	AWG 16

CONNECTION DIAGRAM, RCL-600A/24V

Table 2

*	Main cable and source cable size	
	0 – 30 ft run:	AWG 14
	30 – 50 ft run:	AWG 12
	50 – 100 ft run:	AWG 10
**	Control cable size	
	0 – 100 ft run:	AWG 16
***	Remote Panels Cable	
	0 – 100 ft run:	AWG 16