

## Sea-Dog Main Breaker Panel

Model # 423130

Model # 423132

### Assembly and Installation Instructions

**Read these instructions completely before starting assembly or installation**

The installation of this panel should be in accordance with the most current revision of U.S. Coast Guard 33CFR 183-1 and ABYC Standard E-9, Direct Current (DC) Electrical Systems on Boats or E-8, Alternating Current (AC) Electrical Systems on Boats. Standards may be obtained from:

Superintendent of Documents  
Government Printing Office  
Washington, D.C. 20402

American Boat and Yacht Council  
3069 Solomon's Island Road  
Edgewater, MD 21037

33CFR 183 Subpart I

Standards and Recommended Practices  
For Small Craft

If these standards are unavailable or the installer is otherwise unsure of proper practice, seek competent professional assistance.

**EVIDENCE OF FAULTY CONNECTION RESULTING IN COMPONENT DAMAGE WILL VIOLATE WARRANTY PROVISIONS. REVIEW INSTALLATION INSTRUCTIONS BEFORE STARTING INSTALLATION.**

#### INSTALLATION:

Select an area that is as centrally located as possible to the functional operation of the craft.

**DO NOT** locate on a bulkhead backing up to a fuel or engine compartment.

**DO NOT** locate in an exposed area which receives direct water spray. (This principle applies to all electrical equipment).

Normally the panel is mounted on a bulkhead whose rear is accessible for wire installation. Where rear access is not possible, emphasis must be placed upon the use of flexible cables and conductors to permit the panel to be wired from the outside of the bulkhead. (For this you will need four #6 x 3/4" self-tapping screws to mount the panel).

Locate and drill the mounting holes and make the cutout for installation of the panel (see Fig. 1). Then secure the panel in place with four #6-32 x 1-1/4" machine screws and #6-32 hex nuts. When installation is being made in fiberglass, a backup strip of wood should be used.

**CAUTION:** Your A.C. Main Breaker is the primary link between the power inlet and the breaker panel. For safety always disengage the main breaker if you are working on the breaker panel or a branch circuit.

Using wire sized in accordance to the main breaker rating, (See Fig. 2), connect the power inlet feeder lines to the line terminals, following wire diagram (Fig. 3). Run jumper wires of proper size (see Fig. 2) from the main breaker to the breaker panel, as shown in Fig. 3. If any possibility of personal contact with rear of panel exists, provide a suitable cover or enclosure to guarantee safety.

**The green ground wire must be connected to both the main breaker and the panel, as shown in Fig. 3.**

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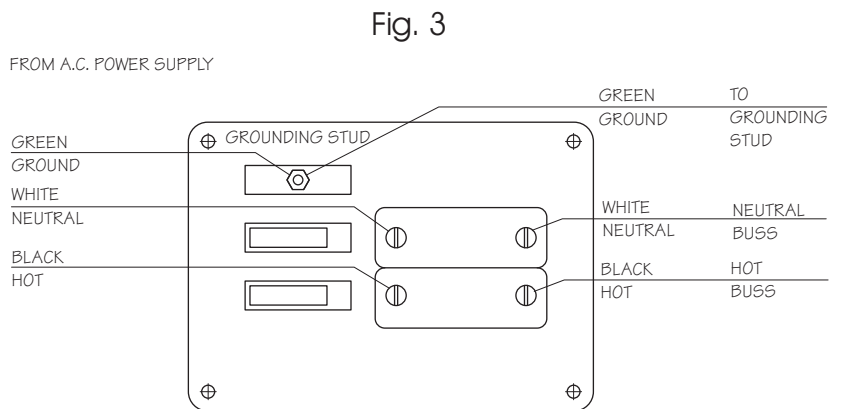
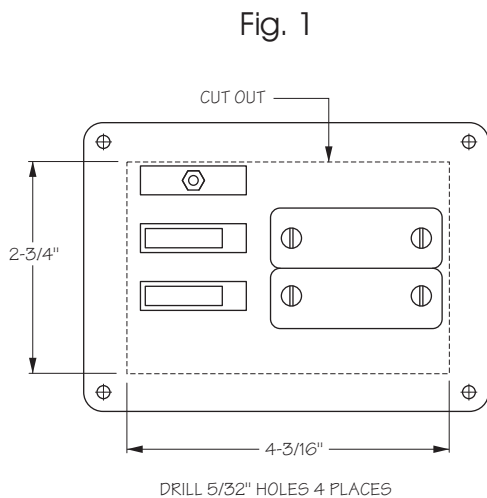
## OPERATION:

With the main breaker in the off position, no power is supplied to the vessel's A.C. distribution system. If you are using shore power, you must check for proper polarity before you engage the main breaker. If you find you do not have proper polarity, reverse the shore leads. If you find you still do not have proper polarity, the services of a component technician should be engaged to correct the fault.

Once you have determined that you have proper polarity, close the main breaker to supply power to the breaker panel. A main breaker trip indicates that a load combination which demands more power than can be permitted by the system is on line. Turn off all nonessential circuits, or time share as required, to permit the main breaker to be reset.

Once you have completed your wiring and checked the circuit, you can use the self-adhesive labels to identify the circuit.

THIS INSTRUCTION AND OPERATION DOCUMENT SHOULD BECOME PART OF THE BOAT OWNERS MANUAL OR SHIP'S PAPERS.



ALLOWABLE AMPERAGE OF CONDUCTORS FOR UNDER 50 VOLTS														
CONDUCTOR SIZE ENGLISH(METRIC)	60 C 140 F		75 C 167 F		80 C 176 F		90 C 194 F		105 C 221 F		125 C 257 F		200 C 392 F	
	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces	Outside Engine Spaces	Inside Engine Spaces
18 (.8)	10	5.8	10	7.5	15	11.7	20	16.4	20	17.0	25	22.3	25	
16 (1)	15	8.7	15	11.3	20	15.8	25	20.5	25	21.3	30	26.7	35	
14 (2)	20	11.6	20	15.0	25	19.5	30	24.6	35	29.8	40	35.6	45	
12 (3)	25	14.5	25	18.8	35	27.3	40	32.8	45	38.3	50	44.5	55	
10 (5)	40	23.2	40	30.0	50	39.0	55	45.1	60	51.0	70	62.3	70	
8 (8)	55	31.9	65	48.8	70	54.6	70	57.4	80	88.0	90	80.1	100	
6 (13)	80	46.4	95	71.3	100	73.0	100	82.0	120	102.0	125	111.3	135	
4 (19)	105	60.9	125	93.8	130	101.4	135	110.7	160	136.0	170	151.3	180	
2 (32)	140	81.2	170	127.5	175	136.5	180	147.6	210	178.5	225	200.3	240	
1 (40)	165	95.7	195	146.3	210	163.8	210	172.2	245	208.3	265	235.9	280	
0 (50)	105	113.1	230	172.5	245	191.1	245	200.0	285	242.3	305	271.5	325	
00 (82)	225	130.5	265	198.8	285	222.3	285	233.7	330	280.5	355	316.0	370	
000 (81)	260	150.8	310	232.5	330	257.4	330	270.6	385	327.3	410	364.9	430	
0000 (103)	300	174.0	360	270.0	385	300.3	385	315.7	445	378.3	475	422.8	510	

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Fig. 2