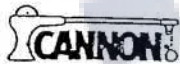


Maintaining Your Helmsman®

For freshwater operation, clean and re-grease clutch surfaces and needle bearing after every 50 hours or so of use.

For saltwater operation, clean unit thoroughly after each trip, and re-lubricate, as above, on a more frequent basis.

Fuse is replaceable with a standard 15-amp automotive fuse.



HELMSMAN®

Cannon Helmsman Radio Control Option:

Cordless Radio control may be purchased at a later date and converted simply by disconnecting hand control cord and connecting receiver cord.

Radio Controlled Transmitter & Receiver conversion unit... No. RC2706A.

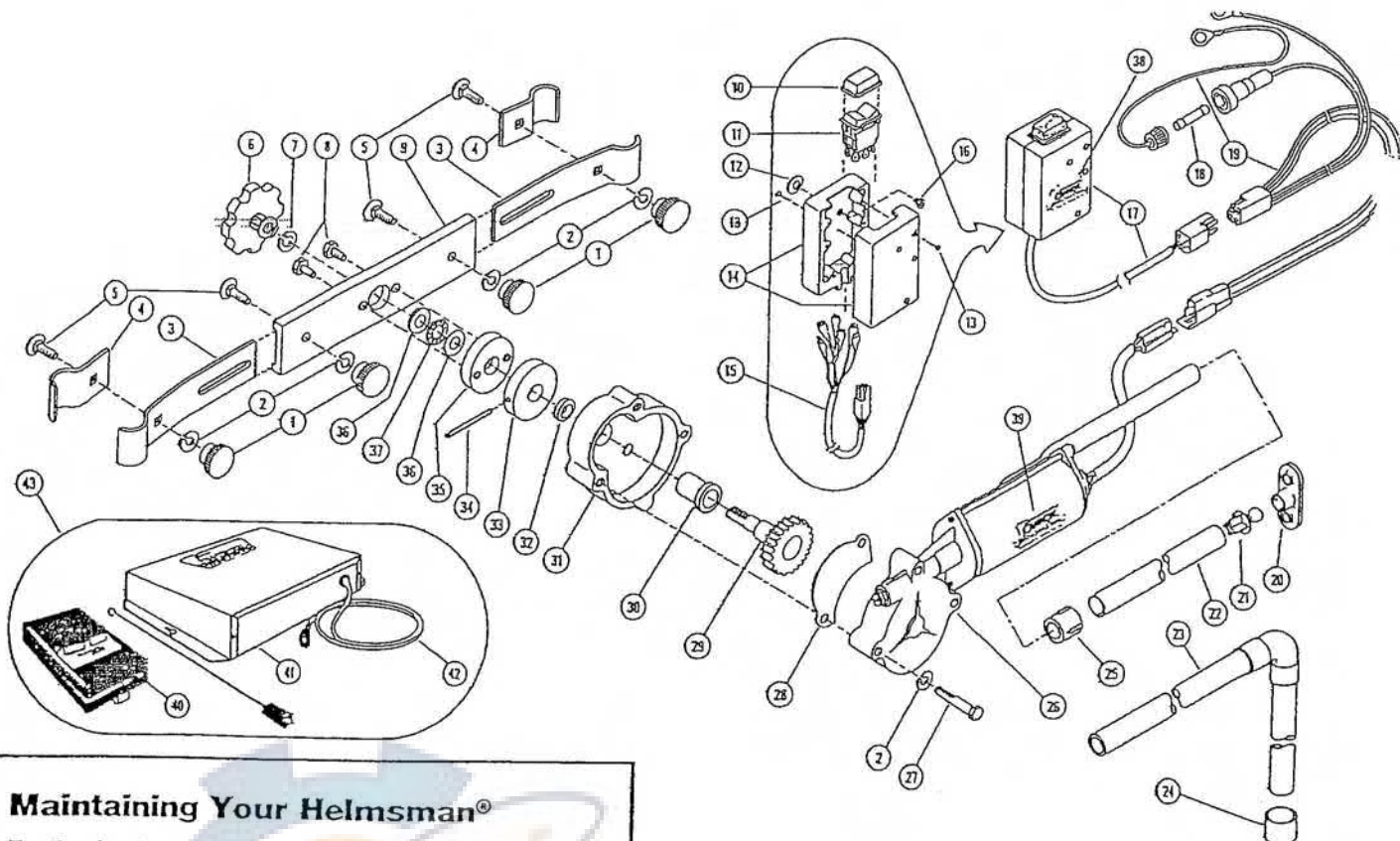
Key No.	Part Name	Part No.
1.	Thumb knob (four needed)	RC2324
2.	Lock washer— $\frac{1}{4}$ " (seven needed)	C2108
3.	Arm—adjustable, 15" bend (two needed)	RC2329
3a.	Set of optional arms with 32" bend	RC2329B
4.	Clamp—adjustable arm (two needed)	RC2330
5.	Carriage bolt (four needed)	RC2325
6.	Knob—clutch tension <i>Assy</i>	RC2308A
7.	Lock washer— $\frac{3}{8}$ "	RC2318
8.	Bolt— $\frac{1}{4}$ -20 x $\frac{1}{2}$ " (two needed)	RC2317
9.	Center bar—standard for 16"-20" wheels for 20"-24" wheels	RC2305-8 RC2305-12 RC2305-16
10.	Boot—hand control	RC2336
11.	Switch—hand control	RC2335
12.	Button—hand control	RC2337
13.	Screw—hand control housing (6 needed)	RC2184
14.	Housing—hand control (2 needed)	RC2334
14a.	Housing assembly—hand control Includes both housings (C2334), 6 screws (C2184), button (C2337), and screw (RC2369).	RC2334A
15.	Cable—hand control <i>HARNES</i>	RC2319
16.	Screw—button	RC2369
17.	Hand control assembly	RC2487A
18.	Fuse—15-amp automotive, SOC15A-SSA32A
19.	Wire harness	RC2320

Key No.	Part Name	Part No.
20.	Socket—anchor tube	RC2328
21.	Ball—anchor tube	RC2327
22.	Anchor tube—straight "10 inch"	RC2316
23 & 24.	Anchor tube assembly—right-angle	RC2443A
24.	Cup—anchor	RC2452
25.	Collar—anchor tube	RC2339
26.	Motor with stabilizer tube	RC2323A
27.	Bolt— $\frac{1}{4}$ -20 x $1\frac{1}{2}$ " (three needed)	RC2332
28.	Cover—gear box	RC2303
29.	Gear/arbor <i>Assy SHAFT & GEAR</i>	RC2310A
30.	Bushing—gear box <i>BEARING BRONZE FLNG.</i>	RC2314
31.	Box—gear	RC2302
32.	Thrust bearing <i>Nylon Thrust 9010430</i>	RC2326
33.	Clutch—drive <i>DRIVE PLATE FINISHED</i>	RC2311
34.	Pin—drive clutch <i>3 X 16 X 1</i>	RC2312
35.	Clutch plate	RC2313
36.	Race—needle bearing (two needed)	C2281
37.	Needle bearing	C2280

Made in U.S.A.

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1732 Glade Street Muskegon, Michigan 49441



Maintaining Your Helmsman®

For freshwater operation, clean and re-grease clutch surfaces and needle bearing after every 50 hours or so of use.

For saltwater operation, clean unit thoroughly after each trip, and re-lubricate, as above, on a more frequent basis.

Use Noalox at all electrical connections.

Fuse is replaceable with a standard 15-amp automotive fuse.

Cannon Helmsman Radio Control Option:

Cordless Radio control may be purchased at a later date and converted simply by disconnecting hand control cord and connecting receiver cord.

Radio Controlled Transmitter & Receiver conversion unit...2250942

HELMSMAN®

Key No.	Part Name	Drwg. No.	Part No.
1.	Knob — thumb (4 needed)	C2324	1649613
2.	Washer ¼ lock (7 needed)	C2108	9430070
3.	Arm adjustable 20° bend (2 needed)	C2329	1602310
3a.	Arm 32° bend (set of 2 optional)	C2329B	1602312
4.	Clamp adjustable arms (2 needed)	C2330	1619475
5.	Bolt ¼-20 x ¾ carriage (4 needed)	C2325	9040100
6.	Knob clutch — tension	C2308A	1600612
7.	Washer 3/8 lock	C2318	9430130
8.	Bolt ¼-20 x ½ hex hd (2 needed)	C2317	9040070
9.	Bar — center (standard)	C2305-8	1606319
	(for 16"-20" wheels)	C2305-12	1606320
	(for 20"-24" wheels)	C2305-16	1606321
10.	Boot — switch	C2336	1621492
11.	Switch — hand control	C2335	1686789
12.	Button — knob — hand switch	C2337	1649622
13.	Screw #4 x ½ pan hd (6 needed)	C2184	9370010
14.	Housing switch (2 needed)	C2334	1643601
15.	Wire — harness hand control	C2319	1641595
16.	Screw #10-24 x 3/8 pan hd.	C2369	9280040
17.	Hand control assembly	C2322A	1600789
18.	Fuse 15 amp automotive 50615A-55A32A		
19.	Wire — Harness assembly	C2320A	1641596
20.	Socket — anchor tube	C2328	1683775
21.	Ball — anchor tube	C2327	1605317
22.	Tube — anchor straight	C2316	1690802

Key No.	Part Name	Drwg. No.	Part No.
23. & 24.	Tube assembly anchor (right angle)	C2443AK	1650136
24.	Cup — anchor	C2452	1616405
25.	Collar — anchor tube	C2339	9100420
26.	Motor & tube assembly	C2323A	1600661
27.	Bolt ¼-20 x 1½ (3 needed)	C2332	9040220
28.	Cover gear box	C2303	1621489
29.	Gear & shaft assembly	C2310A	1600758
30.	Bearing — bronze flanged	C2314	9010190
31.	Box — gear	C2302	1621498
32.	Bearing — thrust (nylon)	C2326	9010430
33.	Plate — drive	C2311	1667707
34.	Pin 3/16 x 1¼ roll	C2312	9250160
35.	Plate — clutch	C2313	1667708
36.	Race — thrust bearing (2 needed)	C2281	9010130
37.	Bearing — needle thrust	C2280	9010100
38.	Decal — switch assembly Helmsman	C2985	1624789
39.	Decal — motor Helmsman	C2984	1624527

RADIO CONTROL COMPONENTS

40.	Transmitter — radio control	C2657A	2289793
41.	Receiver — radio control	C2658A	2273732
42.	Harness — wire — receiver	C2660	1641598
43.	Kit — radio control	C2706AK	2250942

Made in U.S.A.

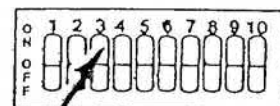
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Form No. 1681000 Rev. 1/88

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1732 Glade Street Muskegon, Michigan 49441



IMPORTANT INSTRUCTIONS for RADIO CONTROLLED HELMSMAN

Before you begin to use your new Radio Controlled Helmsman, you must set the code switches in the transmitter and receiver to your own personal code as they are all set the same.



Transmitter

Remove the two screws on the back and lift the front cover off to expose the switches. You will note that there are ten code switches on each bank. Using a pen, set one through nine on each bank identical to the other, using your own **personal** code. The number ten switch determines what direction each button will steer your boat and must be set opposite one another.

We strongly urge you to avoid the following code schemes: all on; all off; 2,4,6,8 on; or 1,3,5,7,9 on. These codes would be easily selected by others. Using random code schemes is a must.

Receiver

Remove cover of cabinet to gain access to the code switches and set the switch identical to those you set in the transmitter (there is no number ten switch in the receiver). Before you close both units plug the four-way lead into the wire harness of the Helmsman unit and see that both left and right are operational. **Note:** There is a slight delay (about $\frac{1}{4}$ of a second) from the instant you press the button and the time the unit reacts. This is not a malfunction.

Installation

Install your receiver in a compartment or bulkhead out of reach by rain or water. **Note:** Antenna **MUST NOT** be shielded by a metal bulkhead. Keep the transmitter out of rain or water.

Operation

USE ONLY AT TROLLING SPEEDS. DO NOT ATTEMPT TO USE WHEN DOCKING OR IN A CONGESTED AREA. YOU MUST MAINTAIN A PROPER "LOOK OUT" AT ALL TIMES. Dry out transmitter thoroughly if saturated with water.

Repairs

If you do have a malfunction, check all of the following: fuse, battery, (boat) transmitter battery, battery terminals, plug connections for loose or corroded connections. Determine whether the malfunction is in the electronics or hardware by using insulated alligator jumpers and jump from the single black and red wire harness lead to the double black cord going to the motor. Reverse connections (red and black) to check the other direction. If you have determined that the fault lies in the electronics, send the receiver and the transmitter to the factory.

S & K Products, Inc.

1732 Glade Street Muskegon, Michigan 49441

(616) 722-6036

Form #1681002 Rev. 1/88



HELMSMAN®

Remote Control Steering Unit... Easy to Install and Operate

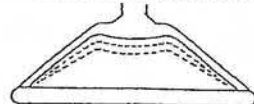
For best results, follow instructions carefully.

Installing Your Helmsman

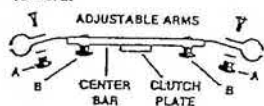
1. Prepare Cross-Bar Assembly.

- Arrange cross-bar assembly, as pictured, to fit the hub style of your steering wheel.

Note: There must be at least 1" clearance between steering wheel hub and back of center bar to permit operation of clutch tension knob.



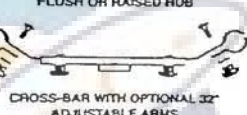
For steering wheel with deep-recess hub, use the cross-bar as shipped, with the adjustable arms angled forward:



For wheel with shallow-recess hub, reassemble cross-bar with the adjustable arms angled rearward:



If your steering wheel has either a flush or raised hub, ask your dealer to exchange the standard adjustable arms for optional arms — accessory No. RC2329B. Their 32" bend provides the necessary clearance for these hub types.



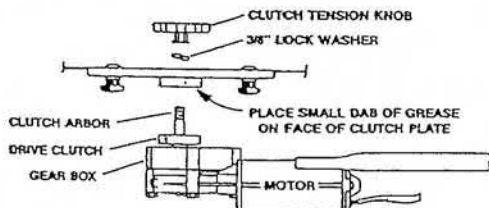
- Clamp cross-bar lightly to steering wheel. The adjustable arms slide in and out to fit most steering wheels.

Larger Wheels: If your steering wheel is larger than 16" (inside diameter of rim), you'll need a longer center bar. For 16" to 20" wheels, ask for No. RC2305-12. For 20" to 24" wheels, ask for No. RC2305-16.

- Make sure clutch plate is centered over wheel hub — both horizontally and vertically — and tighten thumb knobs "B". Then loosen thumb knobs "A" and remove cross-bar.

2. Attach Motor to Cross-Bar.

- Smear a thin film of grease on face of clutch plate to reduce friction. This also permits you to override the remote control and change course manually in case of emergency.
- Slide cross-bar assembly over clutch arbor on motor unit and secure with clutch tension knob and 3/8" lock washer as pictured.



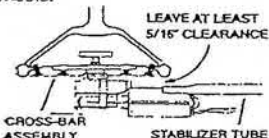
- Replace entire assembly on steering wheel, and tighten thumb knobs "A" securely.

4. Attach Anchor Tube.

STRAIGHT ANCHOR TUBE

- Find anchor point by rotating motor unit on steering wheel until stabilizer tube is pointing at best location on gunwale or console.

Important: Make sure the selected point does not interfere with full operation of throttle lever. Also make sure it leaves at least 5/16-inch clearance, as pictured, between stabilizer tube and cross-bar assembly.

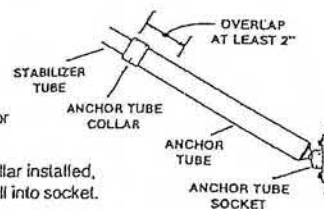


- It may be necessary to cut off a portion of anchor tube for proper fit. Be sure an anchor tube overlaps stabilizer tube at least 2".

Note: A tubing cutter works best for shortening anchor tube. If you use a saw, file your cut smooth before inserting it into nylon collar.

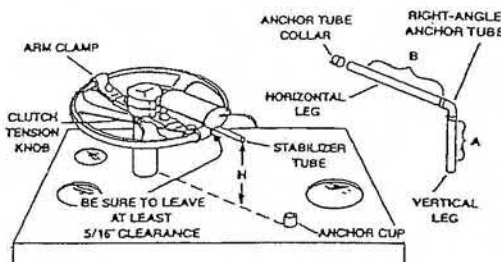
- Fasten anchor tube socket securely to gunwale or console, using screws or other fasteners appropriate for the type of surface.

- Slide anchor tube, with nylon collar installed, over stabilizer tube and snap ball into socket.



OPTIONAL RIGHT-ANGLE ANCHOR TUBE

- Select a convenient point on your console for locating the anchor cup, keeping in mind the length of the anchor tube. Fasten anchor cup securely in the selected position, using a screw or other fastener appropriate for the type of surface.
- Aim stabilizer tube toward anchor cup and measure the perpendicular distance from console to bottom of stabilizer tube (dimension H in illustration).



Important: Make sure you're holding the motor unit so there's at least 5/16-inch clearance between stabilizer tube and arm clamp while you measure.

- Cut vertical leg of anchor tube (dimension A): Deduct 1 1/2" from your measurement (H), and mark this dimension (A) on the short end of the tube, measuring from base of elbow. *Example:* If measurement H was 4 1/2", you would mark length A at 3" (4 1/2 minus 1 1/2 = 3).

If measurement H is more than 6", use the long end of the tube for the vertical leg, and make sure the anchor cup is close enough to the wheel to reach with the short end as the horizontal leg.

Note: A tubing cutter works best for shortening anchor tube (stabilizer tube, too, when necessary). If you use a saw, file your cut smooth before inserting it into nylon collar.

- Cut horizontal leg of anchor tube (dimension B): Insert vertical leg in anchor cup. Swing anchor tube and stabilizer tube so they're side by side. Mark spot for cutting anchor tube (if necessary) that allows it to overlap stabilizer tube at least 2".
- Place collar on horizontal end of anchor tube, then slip it over end of stabilizer tube. Loosen clutch tension knob until you can lift the motor sufficiently to insert other end of anchor tube in anchor cup. Retighten tension knob.

5. Connect Wire Harness.

- Connect the two ring terminals to your 12-volt battery — red wire to positive (+), black wire to negative (-).
- Connect the 2-way plug to motor pigtail.
- Connect the 4-way plug to hand control. Access to the 4-way plug must be provided within 8' of steering wheel.

Operating Your Helmsman

Remote Operation. Turn clutch tension knob counterclockwise to engage motor for remote control. Always check your position and the clearance ahead before operating the remote control.

Manual Operation. Rotate clutch tension knob slightly clockwise to disengage motor for manual operation. If you wish, unit can be very easily removed from steering wheel: Just loosen thumb knobs "A", unplug pigtail, and snap anchor ball out of socket.

In Case of Emergency, you can override the clutch tension by just turning the steering wheel manually — if you have a film of grease between the clutch plates per instruction 2a.

Make sure hand control is never left in bottom of boat where it could be covered with water or stepped on.

DO NOT USE FOR: High speed steering ... Docking, or ... Maneuvering in congested boat traffic.