



CH1900 Series Electronic Control Installation Manual

... includes CP1200 Operator Panel



MANIN1900
Revision 0

Notice to Boat Manufacturer, Installer, and Consumer

Throughout this manual, warnings are used to alert the installer/operator to special instructions concerning a particular service or operation that may be hazardous if performed incorrectly or carelessly. Observe these alerts carefully!

These “safety alerts” alone cannot eliminate the hazards that they signal. Strict compliance to these special instructions when performing installation, operation, and maintenance plus “common sense” operation are the most effective accident prevention measures.

▲ WARNING

This device should not be used as a navigational aid to prevent collision, grounding, boat damage, or personal injury. When the boat is moving, water depth may change too quickly to allow time for you to react. Always operate the boat at very slow speeds if you suspect shallow water or submerged objects.

Disassembly and repair of this electronic unit should only be performed by authorized service personnel. Any modification of the serial number or attempt to repair the original equipment or accessories by unauthorized individuals will void the warranty.

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Overview

The CH1900 Series Control and CP1200 Operator Panel are designed to be used with the Teleflex i6000 system. This manual provides installation details of the control heads and operator interface panel. For installation of other i6000 components, calibration, operation, and other technical information, refer to the i6000 Owners manual provided with each i6000 system.

The CH1900 series control consists of individual port and starboard single lever control heads, a CP1200 Operator Panel, CE41400 interface harness, and mounting hardware. Each CH1900 control is provided with individual adjustment screws to change detent position firmness and/or drag (rotational resistance) so the system can be tailored to the operators preference.

If you need assistance at any time during this installation call
Teleflex Marine Technical Services at 610-495-7011.

Parts Supplied

1. Port control with mounting kit
2. Starboard control with mounting kit
3. Handle kit
4. CP1200 operator panel with mounting kit
5. CE41400 cable harness

Special Tools Required

1. 1-3/4 inch (45 mm) diameter hole saw
2. 2-1/2 inch (64 mm) diameter hole saw
3. Spanner wrench with 3/16 inch (4.8 mm) diameter pins

Mounting Instructions

Mounting the Control Head

Determine a Proper Mounting Location

The CH1900 control heads are designed to be mounted on flat vertical surfaces on port and starboard sides of the operator helm. The controls are designed to mount on surfaces from $\frac{3}{4}$ inch (19 mm) to 1- $\frac{1}{4}$ inch (32 mm) thick.

Since each control head is secured from the inside of the mounting surface, placement must allow clearance for the 5 inch (127 mm) diameter mounting flange, and access behind the mounting surface for attaching mounting hardware, making harness connections, and providing access to drag and detent adjustments.

Placement of the control heads must allow for the full range of lever movement (156 degrees) without clearance problems. Be certain that control levers can be operated through their entire range without risk of hand or finger injury. See Fig. 1 for outline dimensions.

Outline Dimensions

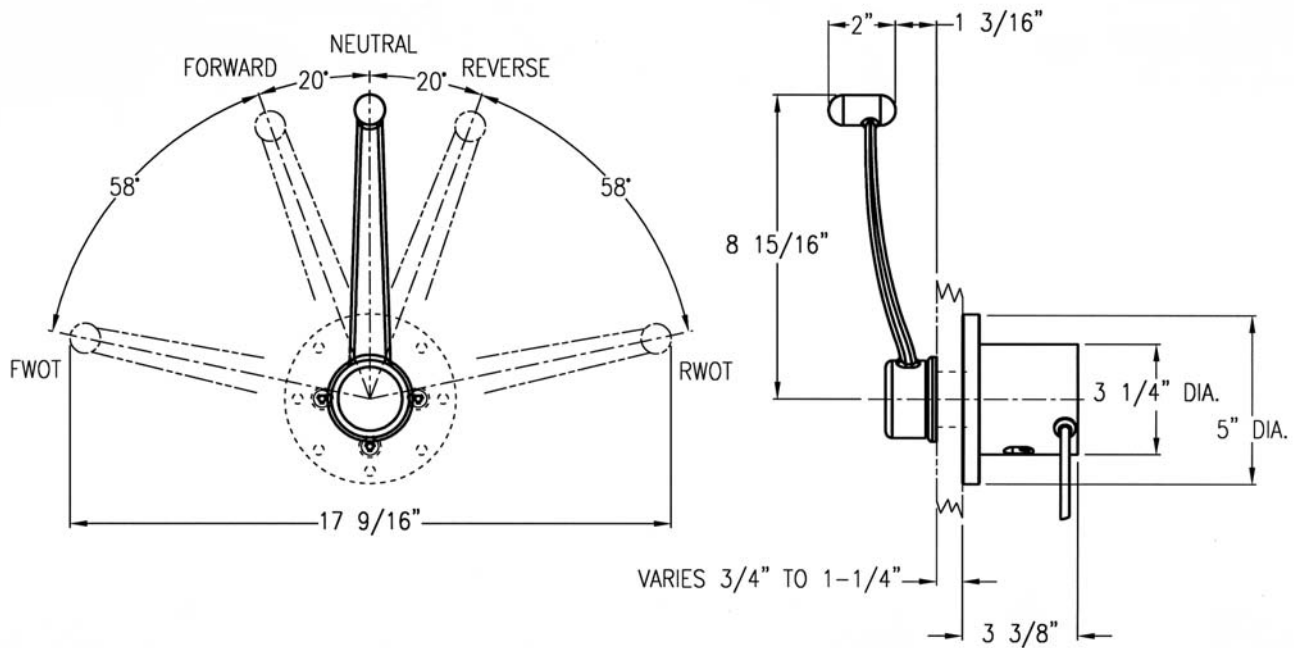


Figure 1: Outline Dimensions

Mounting Instructions

Mount the Control Head

*Note: The port and starboard controls are unique.
Each control head is clearly labeled at the end of each harness.*

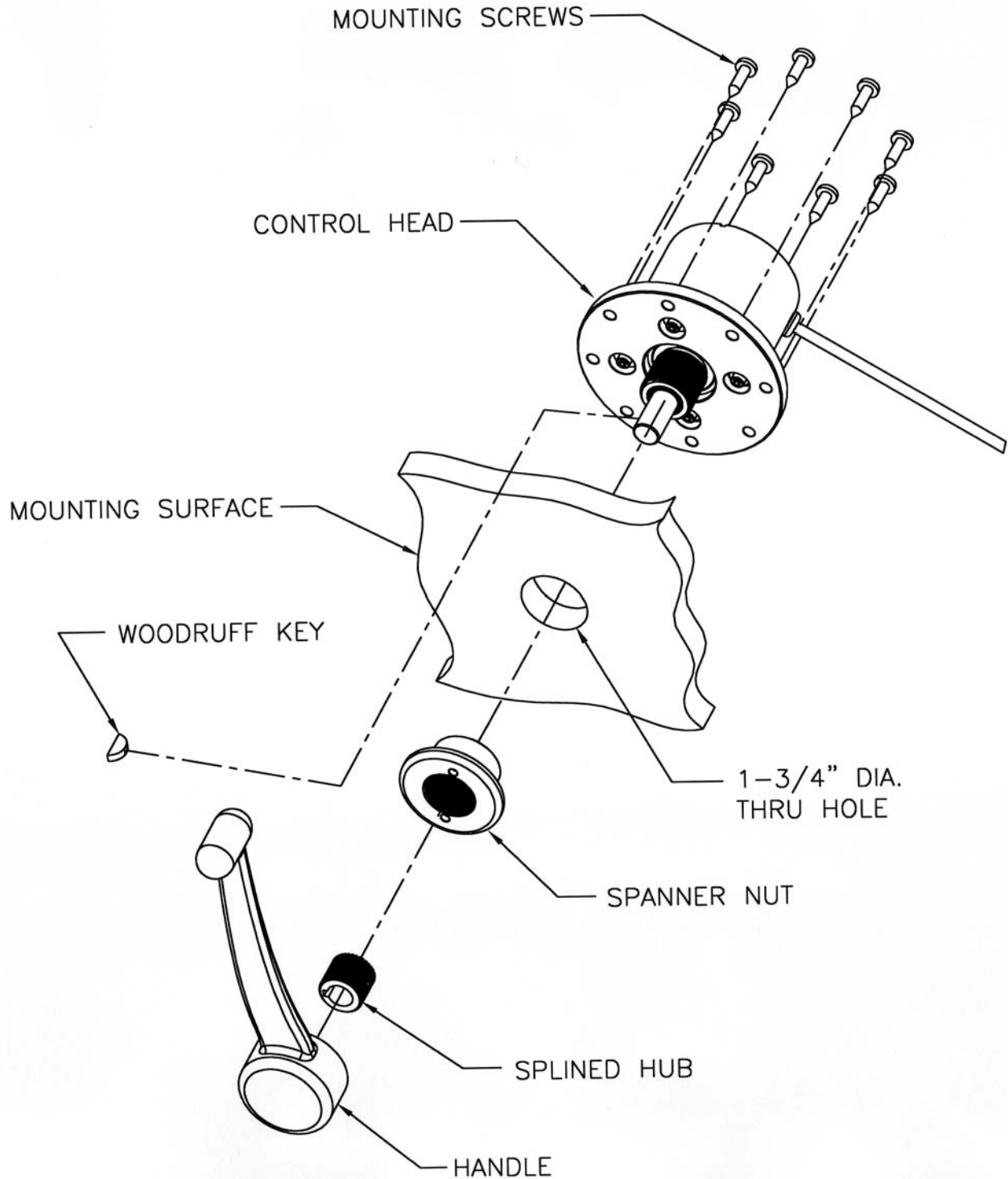


Figure 2: Control Head Mounting

Mounting Instructions

Mount the Control Head

1. Starting with either port or starboard control, locate the desired position of center of handle and cut a 1-3/4 inch (45 mm) diameter through hole in the mounting surface.
2. Remove the spanner nut from the front of the control. Insert the controls threaded flange through the 1-3/4 inch hole from the inside. Re-install the spanner nut from the outside (hand tight only).
3. The control can now be rotated and positioned so that the drag adjustment screw (Fig. 4) is accessible from inside for future adjustments. Note that since the control handle can be mounted in any position about the axis (in 10 degree increments), there is no orientation requirement for the controls.
4. Make any necessary adjustments to plum and square by shimming between the inside installation surface and the face of the mounting flange.
5. When satisfied with position and alignment, tighten the spanner nut.
6. Using pilot hole for the 1/4 inch dia. mounting screws provided, match drill (from inside of boat) the eight flange mounting holes to a maximum depth of 1/2 inch (13 mm), using the holes in flange as a guide.
Caution: Do not drill through outer surface of boat. Since conditions vary widely, it may be necessary to vary the hole size to suit a particular application.
7. Install the eight mounting screws provided.
8. From outside, install woodruff key into shaft and mount center splined hub (part of handle assembly) and tightening set screw securely. Install handle onto hub using set screw provided. The control handle can be mounted in any position about the axis (in 10 degree increments). Choose a position that is both safe and convenient to the boat operator.

Repeat steps 1 through 8 for the second control.

Mounting Instructions

Mounting the CP1200 Operator Panel

Determine a Proper Mounting Location

The CP1200 Operator Panel is designed to be mounted on flat surfaces convenient for both operation and installation. The panel is designed to mount on surfaces from 1/4 inch (6 mm) to 1 inch (25 mm) thick with the hardware provided.

Mount the Operator Panel

Mount the CP1200 Operator Panel Template from the back of this manual to the chosen mounting surface.

Caution: Before using a template from this manual, measure it to be certain it is to scale.

1. Mark the mounting surface for hole placement using the template. Drill four mounting holes and switch center hole.
2. Secure operator panel to the mounting surface with four # 10 x 1-1/2 inch (38 mm) long mounting screws, washers, and locking nuts provided.

Connecting the Components

Complete the installation by connecting components as shown in Fig. 3. Excess harness should be neatly coiled and secured with nylon ties. The components may have to be disconnected for service at some point during the boat's lifetime, so leave at least 4 inches (10 cm) of clearance in all directions for releasing and removing their connectors.

Caution: Harnesses should be run as far as practical from high current wires or wiring runs and should not be subject to water, fuels, lubricants, or excess heat. Electrical connectors should also be protected from rain, spray, and wash down. When possible, install components with connectors pointing downward, or at least angled downward, to protect them from drips.

1. The CE41400 cable harness has five connections:
 - a. Connect the cable marked "Port" to the connector on the Port control head
 - b. Connect the cable marked "Starboard" to the connector on the Starboard control head
 - c. Connect the cable marked "Operator Panel" to the connector on the CP1200 Operator Panel
 - d. Connect the cable marked "Port ECU" to the connector on the CE107xx cable that goes to the control head #1 slot on the port engine's Electronic Control Unit (ECU).
 - e. Connect the cable marked "Starboard ECU" to the connector on the CE107xx cable that goes to the control head #1 slot on the starboard engine's Electronic Control Unit (ECU).

Refer to points a-e on the diagram below. Note that "xx" as in CE107xx is cable length in feet.

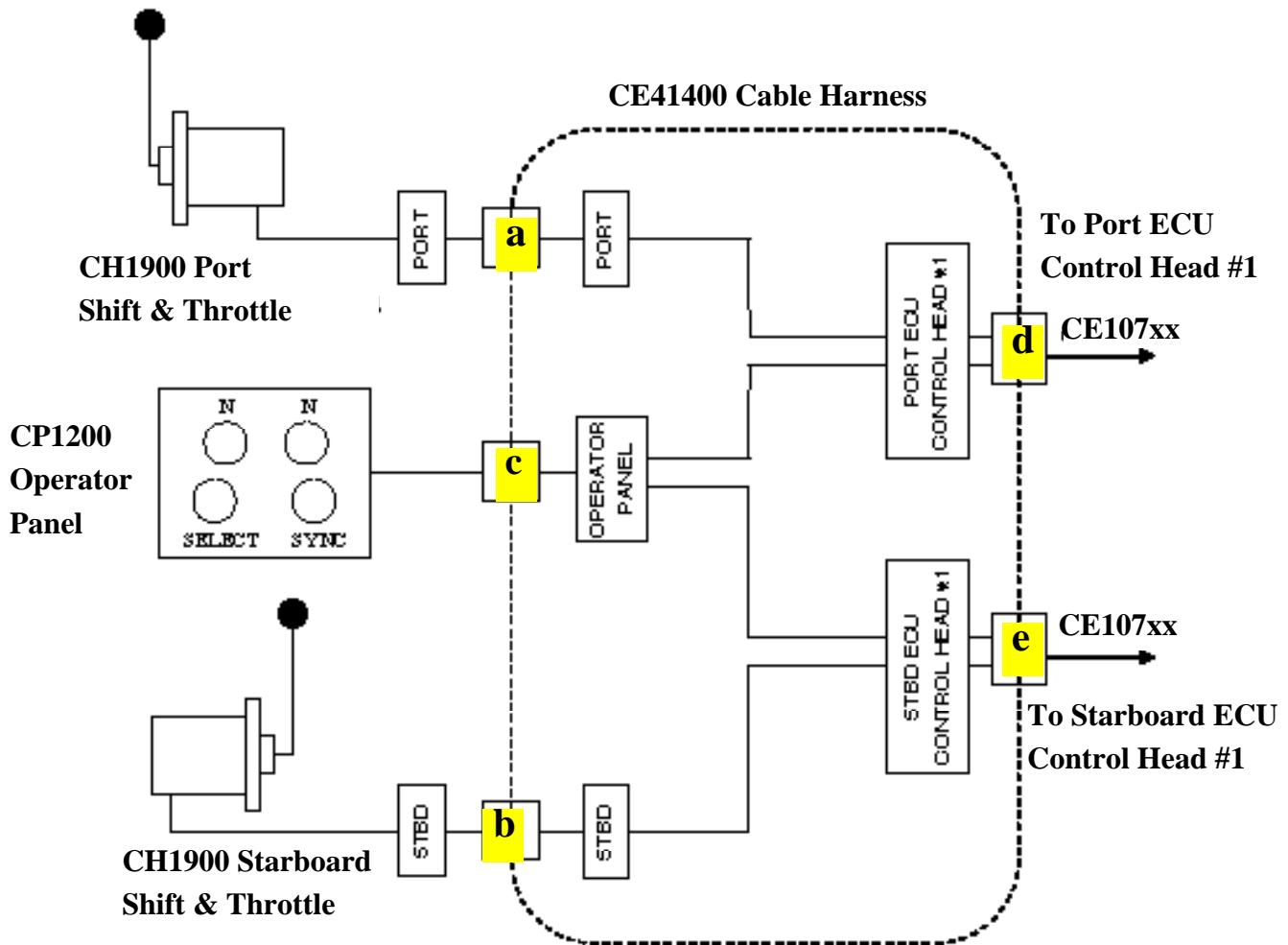


Figure 3: Connection Diagram

CH1900 Setup & Operation

Control Head Drag and Detent Adjustment

Each CH1900 control has been factory pre-set for comfortable detent and drag operation. However, if an operator desires a different “feel” to the controls, adjustments can be made as follows:

Control lever drag:

The drag adjustment screw is located on the side of each control head (see fig. 4). Adjustment requires a 5/32” hex allen wrench. Drag is increased by rotating the screw clockwise, and decreased with counterclockwise rotation. *Be aware that noticeable drag changes are made with relatively small adjustments to the screw.* It is recommended that adjustments be made by turning the screw in small increments (no greater than 1/4 turn) and then feeling the resultant change at the handle.

Caution: Turning the adjustment screw too tight can damage the drag adjustment.



Figure 4: Drag Adjustment Location

Control lever detent position firmness:

The detent adjustment screw is located on the inside end of each control head (see Fig. 5) and requires a flat screwdriver for adjustment. Detent firmness is increased by rotating the screw clockwise, and decreased with counterclockwise rotation. It is recommended that adjustments be made by turning the screw in small increments (no greater than 1/2 turn), then feeling the resultant change at the handle.

Detent adjustment screw

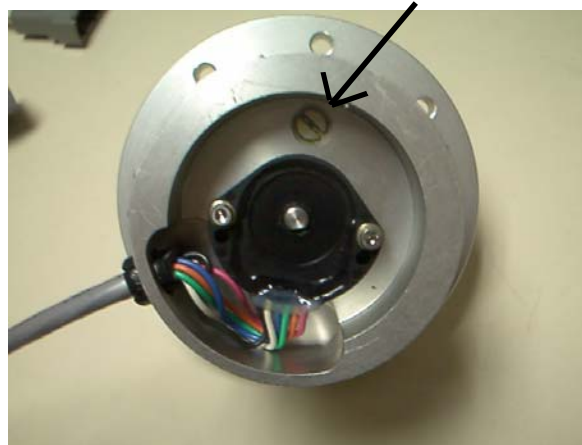
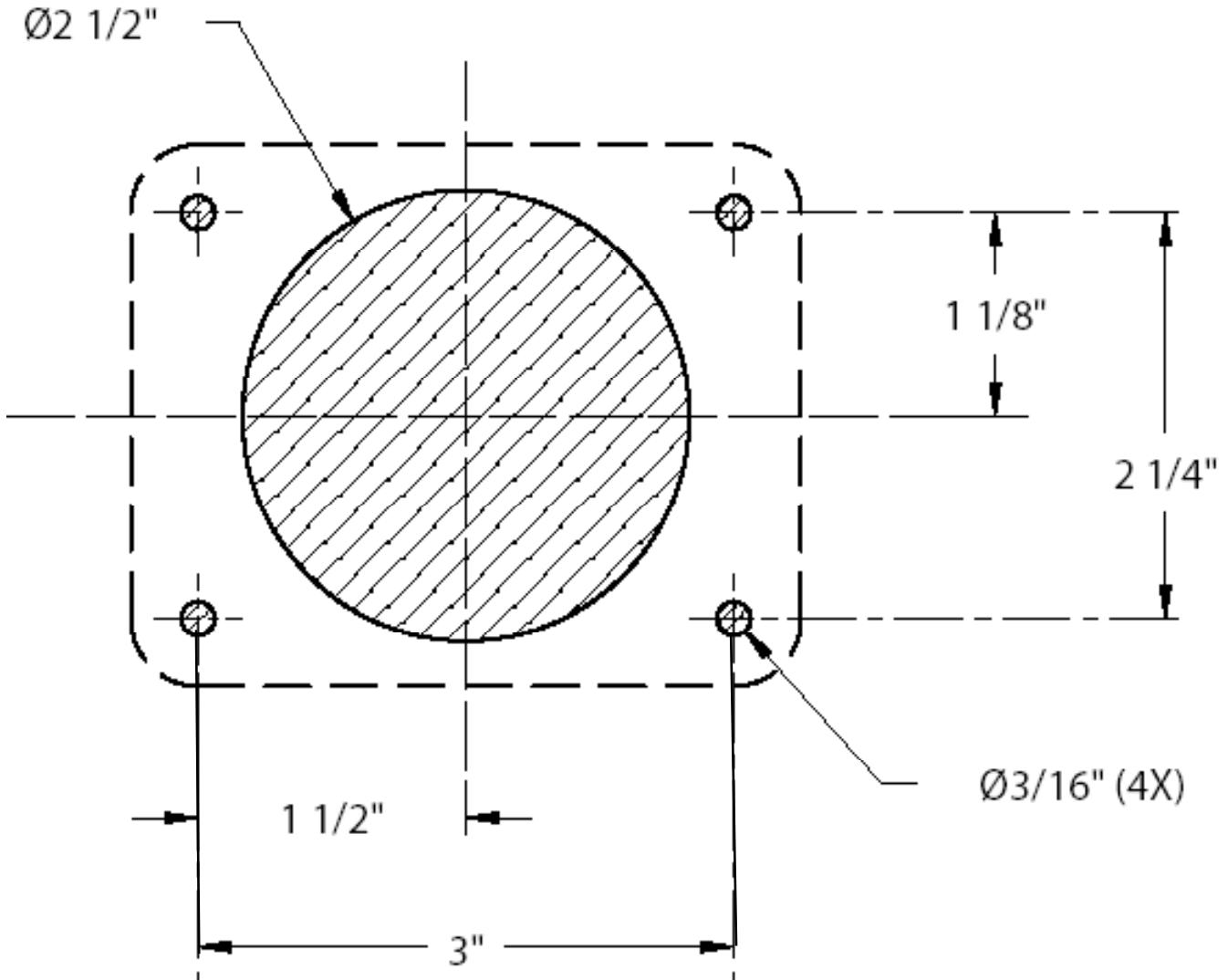


Figure 5: Detent Adjustment Location

After all controls and i6000 system components have been mounted and interconnected, the system must be set up to agree with the engines, transmissions, and operators preferences. For calibration, feature selection, and system operation, refer to the i6000 Owner's Manual.

CP1200 Operator Panel Template



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