

NFU Jog Steering Controls

(with one or two sets of switches)

Installation Instructions



Introduction

ComNav Non Follow-Up (NFU) Jog Steering Controls are rugged, watertight, permanently mountable electrical switches, with a convenient & comfortable ball-topped control lever. They are specifically designed for marine use, for manual non-follow-up (also referred to as “time-dependent”) control of a vessel's steering system.

In use, moving the spring-centred lever to Port (or Starboard) causes the Rudder to move so that the vessel turns to Port (or Starboard).

The turn does not depend on (“follow”) how far the lever is moved, but only on how long the lever is held to Port (or Starboard). That is because the Rudder will keep moving (up to its mechanical &/or electrical stop) as long as the lever is held in that direction, so the resulting turn of the vessel is “non follow-up” – or in other words, “time-dependent”.

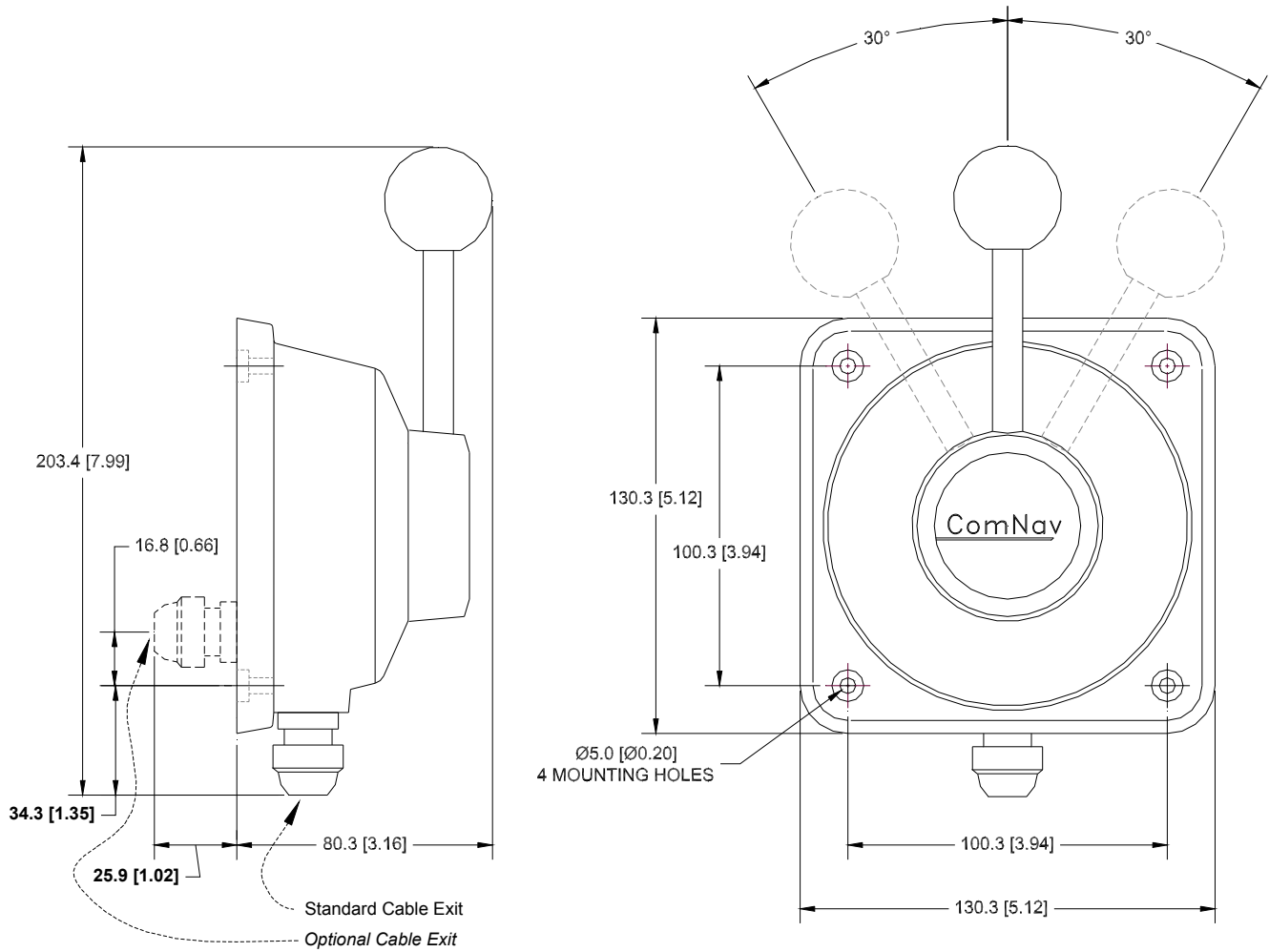
Any desired number of NFU Controls can be wired into all ComNav Autopilot Systems, and most other brands of systems, or in a stand-alone manual steering system.

There are two models:

- PN 20310002: one set of switches, pre-wired with three conductor, #18 AWG, rubber-jacketed marine-grade cable. This model is typically used for common-wired steering solenoids, hydraulic valves or pump motors.
- PN 20310003: two sets of switches, pre-wired with six conductor, #20 AWG, plastic-jacketed marine-grade cable. This model is convenient for operating multiple, independently-wired steering system components, or for activating indicator lights simultaneously with the steering system's valves/etc.
- In both models, the cable is 1.5 metres (5') in length. It exits from the lower rim of the front face, or (available on special order) from the bottom of the housing (see dimensions drawing).

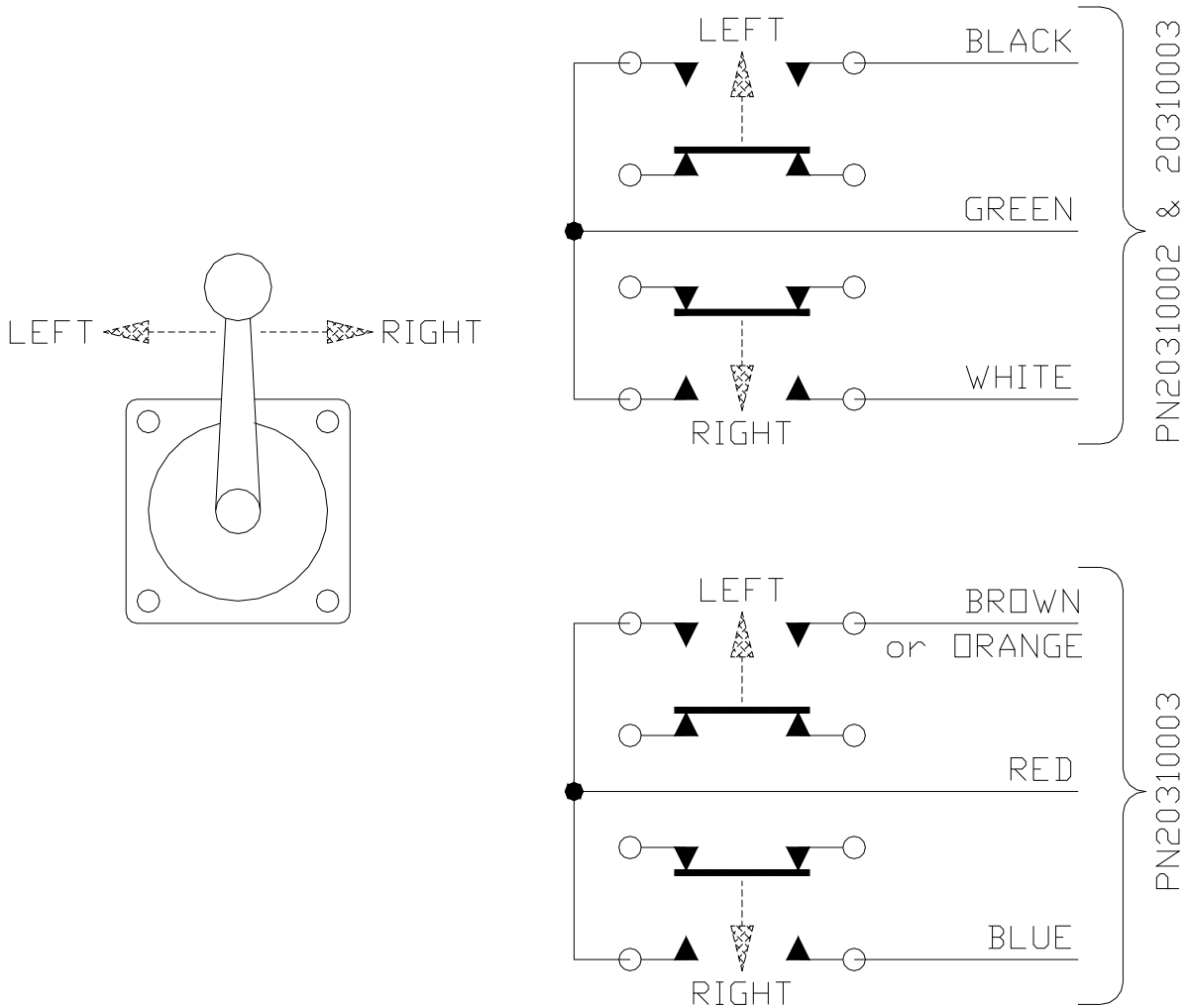
Specifications

| | |
|--------------------------------|--|
| Switching Action | 3 position (spring-centred), Centre off, SPST or DPDT |
| Switch Circuit | PN 20310002: one circuit, SPDT centre-off PN 20310003: two circuits, each SPDT centre-off <ul style="list-style-type: none"> • Two switches per circuit, one terminal on each connected to the common (centre) wire – see page 3 |
| Switches | Single Pole, Single Throw (Form Z), Butterfly® double-break snap action type switch mechanism UL recognized & CSA certified |
| Electrical Rating (per switch) | 7 Amp @ 28VDC 10 Amp @ 125/250 VAC (80% PF) ½ HP @ 125 VAC, ¾ HP @ 250 VAC |
| Weight | 1.3 Lbs (0.6 Kg) |



All Dimensions are in mm[in]

Mounting Dimensions



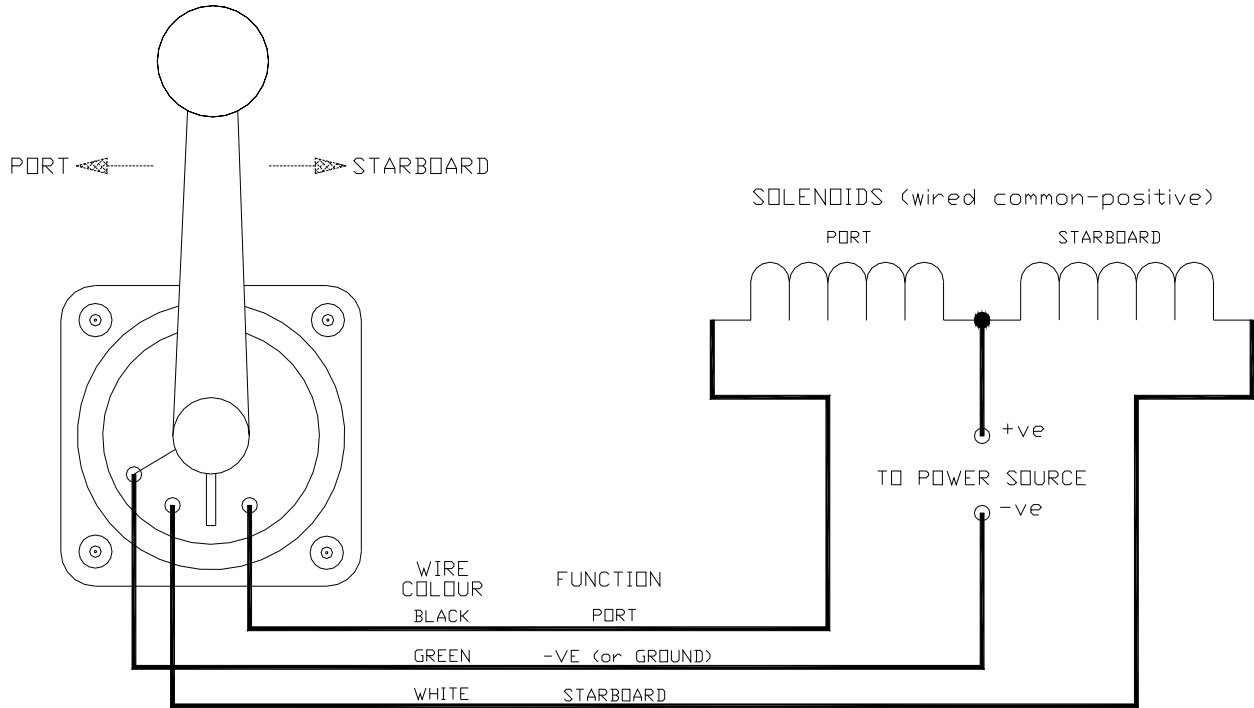
Circuit Diagram

Note: “Left” & “Right” in the diagram above are only meant to show the relationship of lever movement to switch action & wire colours.

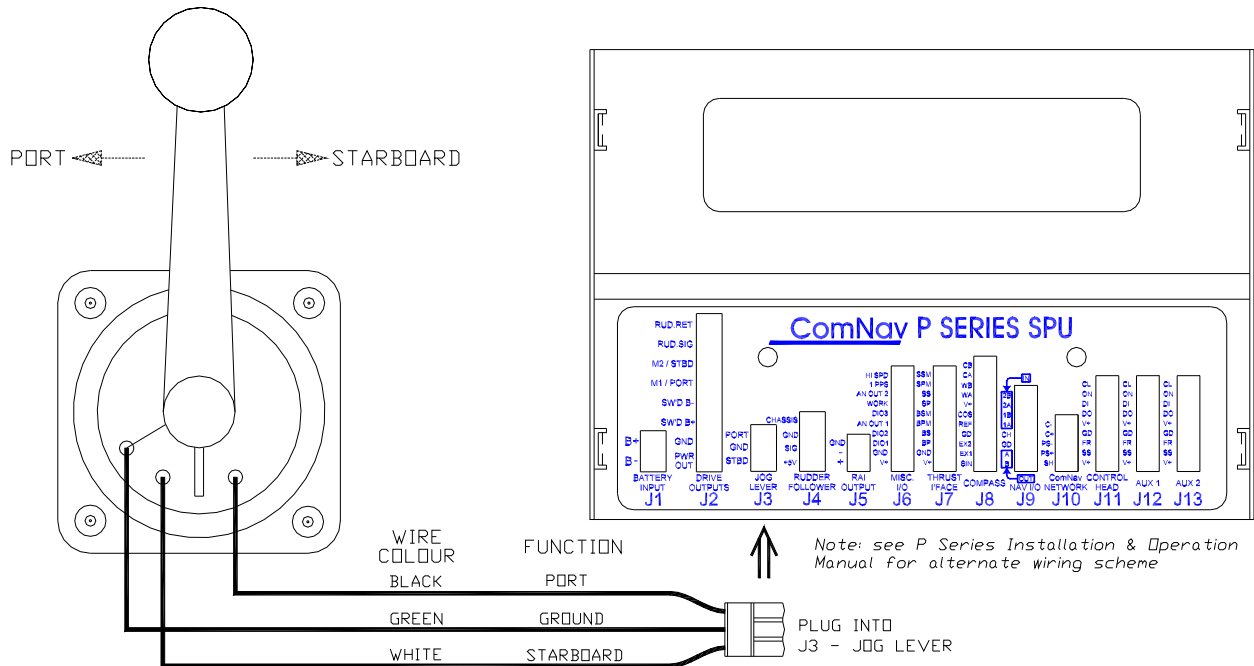
The actual correspondence between the direction of lever movement and rudder/vessel movement will depend on the physical orientation of the Jog Control, and on how it is wired into the steering system.

For example, if you mount the Jog Control on a horizontal surface with the lever pointing to the vessel’s stern, the “Left” & “Right” above would be reversed. And so, you would need to swap the connections of the Black & White (&/or Brown & Blue) wires (see the wiring diagrams, on the next pages), so that moving the Control’s lever to “Left” (i.e. to Port) would cause the vessel to turn to Port, and vice-versa.

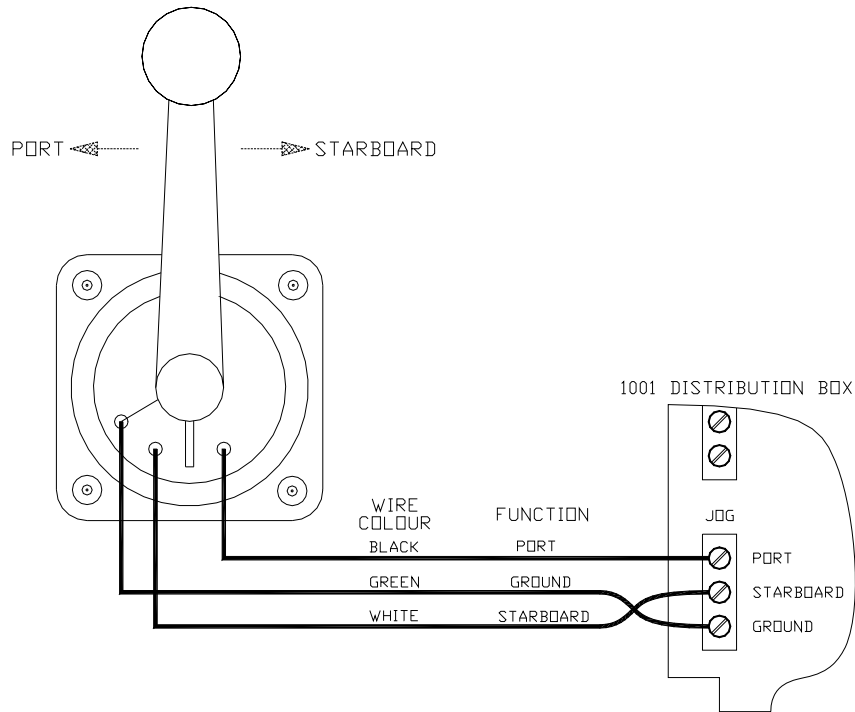
1) Stand-alone manual steering wiring (solenoids or valves):



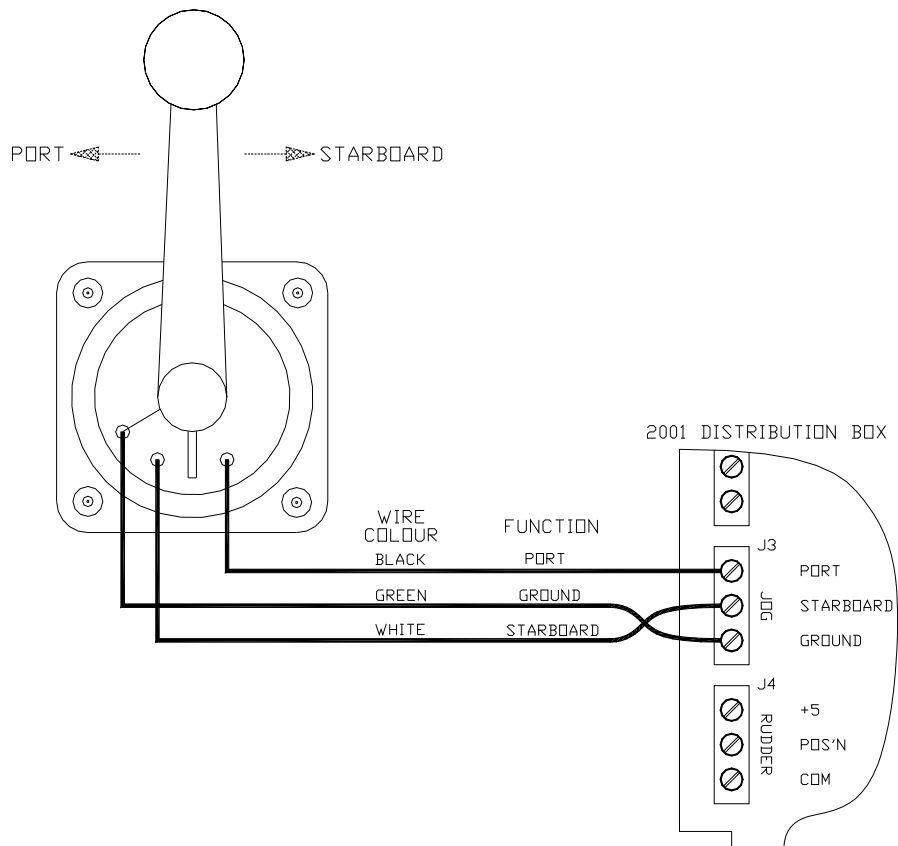
2) Wiring to a Commander or Admiral system:



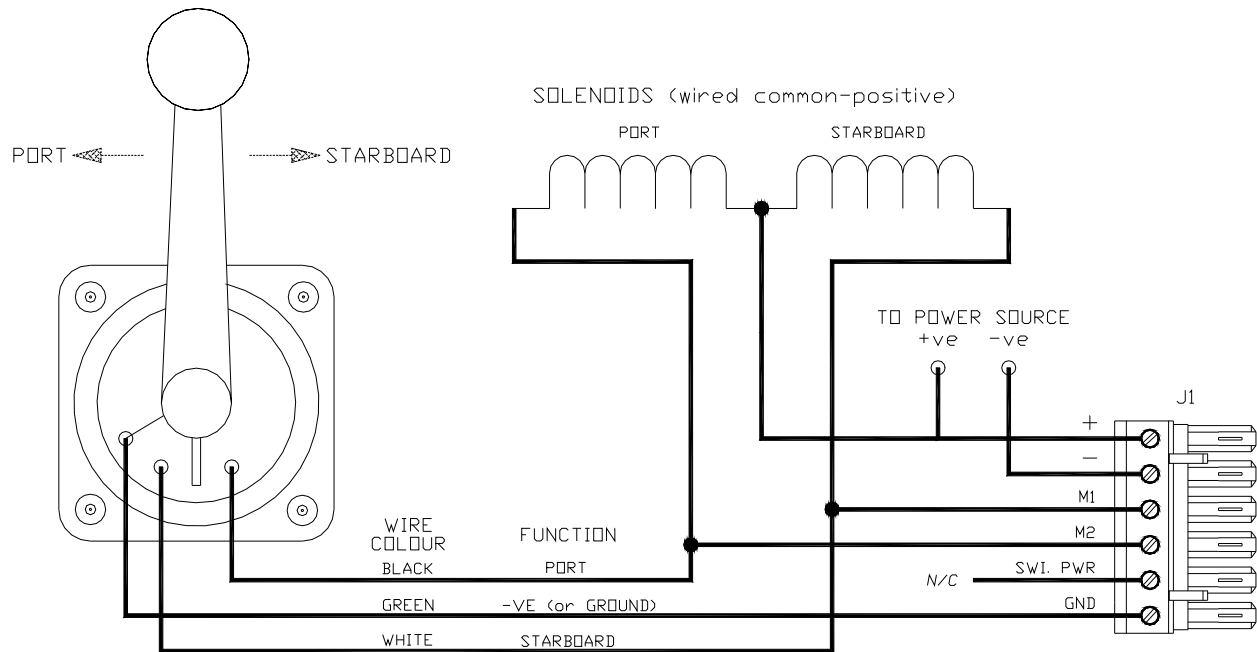
3) Wiring to a 1001 system:



4) Wiring to a 2001 system:



5) Wiring to a 1420/1440/1460/SP-70/SP-80 system using solenoids or valves:



Note: to use a Jog Control on a 14xx/SP-xx system which uses a Reversing Motor, either a relay or a CT-2 Drive Box must be used. Contact your ComNav Dealer for details.

6) Wiring the twin-switch Jog Control:

Either set of switches on the twin-switch Control (PN 20310003) can be used in a stand-alone system, or with an autopilot system. See the wiring diagrams above for using the switches with Green/Black/White wires; if you are using the switches with Red/Brown/Blue wires, substitute those colours in the wiring diagrams above.

If your system uses multiple independently-wired solenoids/valves in parallel, you should follow the wiring diagrams above, using the Green/Black/White wires for one set of solenoids/valves, and the the Red/Brown/Blue wires for the other.

If you wish to wire indicator lights or some other electrical circuits in parallel with your system's solenoids/valves, you can use the Green/Black/White wires for the solenoids/valves and the Red/Brown/Blue wires for the indicators/circuits, or vice-versa.