

Operational description

The product includes a wireless remote control system for a boat.

The system includes two primary components, namely a wireless, hand-held transmitter, and a receiver which is mounted at or near the conventional controls of the yacht. The receiver is configured to receive signals from the transmitter from two frequency band, and to generate commands, in response to such signals, which commands control the operation of the yacht.

The transmitter includes a plurality of switches, for controlling the various components of the boat, such as the engines, the thrusters, and an anchor winch.

The transmitter is activated by pressing the on-off button for more than a predetermined time (such as five seconds).

When one of the switches is activated, the transmitter enable the two radio modules and emits signals representative of the state of each switch, in a repeating cycle on two different frequency band.

When it find an active switch, the transmitter emits the frequency signals on two different bands of transmission, starting with one of the two band, in a casual way, and after the end of the first transmission, emits the signals on the other band.

At the and of every transmission the two radio modules are disabled for a time that could change (casually) from 200 to 400 mSec and after, if there is an activated switch, enabled again to transmit the repeated transmission of the switch's condition.

When no switches are active, the transmitter disable the two radio modules and doesn't emit any signals, also in automatic way, on the two bands.

The receiver has outputs that become active when corresponding signals from the transmitter are received.

The outputs of the receiver are connected to the existing electronic

controls of the boat.

The range of the transmitter is intentionally limited, to minimize interference with other electronic devices in the vicinity. Moreover, in the preferred embodiment, the signal of the transmitter includes a digital code which is unique to the owner of the unit. The digital code can be pre-programmed at a factory.

The transmitter is battery-powered, and the batteries can be replaced by separating the sections and gaining access to a battery box.

The hand-held transmitter unit also includes three light-emitting diodes (LEDs). Two leds illuminates when control signals are transmitted by the hand-held unit to the receiver, one on each frequency band and confirms the transmission of commands.

The other LED illuminates when the available battery power falls below a predetermined level, and is a signal to the user to replace the batteries.

The transmitter is preferably programmed to turn itself off after passage of a predetermined time interval (such as four minutes) following the last variation of actuation of any switch on the unit.

The transmitter is deactivated by pressing the on-off button for more than a predetermined interval (such as three seconds), so as to prevent accidental turn-off of the unit.