

# MULTIFUNCTION FLUSH PANEL

## Operation and Installation Instructions

Part# 221600

**THE FOLLOWING ARE CAUTIONARY STATEMENTS THAT MUST BE READ AND FOLLOWED DURING BOTH INSTALLATION AND OPERATION.**

**WARNING:**



*Raritan Engineering Company, Inc. recommends that a qualified person or electrician install this product. Equipment damage, injury to personnel or death could result from improper installation. Raritan Engineering Company, Inc. accepts no responsibility or liability for damage to equipment, injury or death to personnel that may result from improper installation or operation of this product.*

**WARNING: HAZARD OF SHOCK OR FIRE**



Always use recommended fuse, circuit breaker and wire size.

Switches meet UL 1500 and ISO for Ignition Protection.

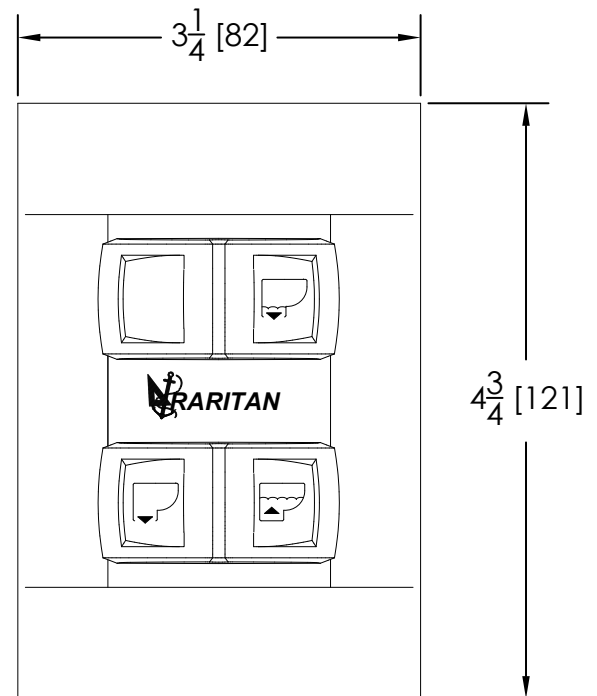
**DO NOT** run continuously for more than 30 seconds.

**Multifunction Flush Panel** is a toilet flush control providing momentary flush functions for normal flushing, adding water to bowl or emptying water from bowl. This panel is designed to be used with Raritan's Atlantes Freedom Vortex Vac, Marine Elegance, SeaEra QC models. This panel may also be used with other electric toilets whereas the discharge pump and rinse water can be operated independently and do not exceed the following voltage and amperage limits:

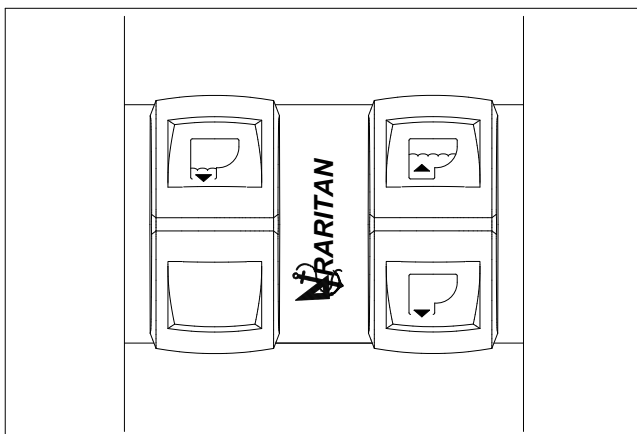
12VDC - 20 amps

24VDC - 15 amps

The panel can be mounted in either a vertical or horizontal orientation.



Vertical






Horizontal



856-825-4900

[www.raritaneng.com](http://www.raritaneng.com)

## OPERATION

1. To flush, press and hold  This will bring water in while evacuating.
2. To empty bowl, press and hold 
3. To add water to bowl, press and hold 

The Multifunton Flush Panel can also be configured with SEA/FRESH Switch.

## INSTALLATION

### MOUNTING ORIENTATION

The panel can be installed either vertically or horizontally. Actuators are installed, at the factory, for vertical installation. For horizontal installations, actuators should be changed.

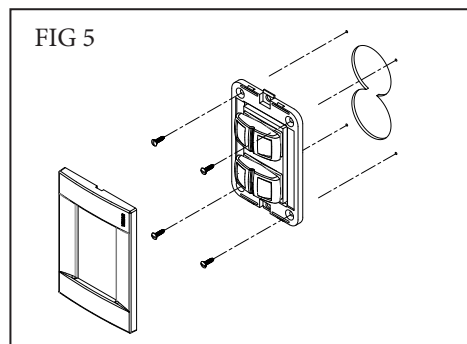
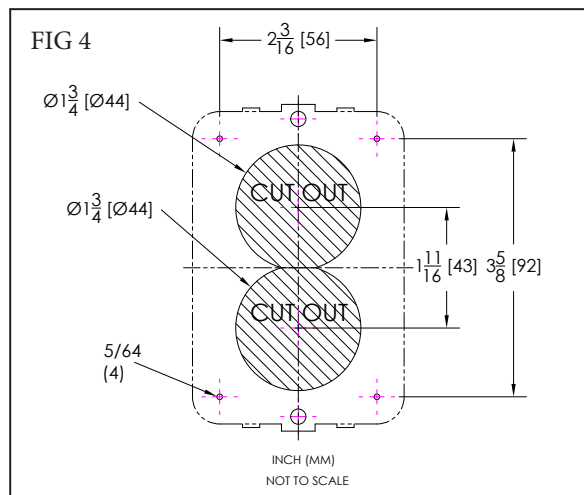
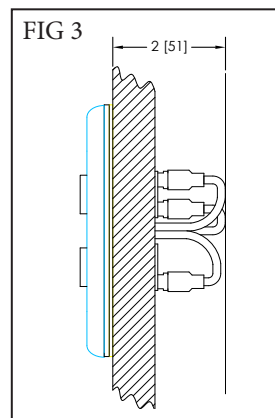
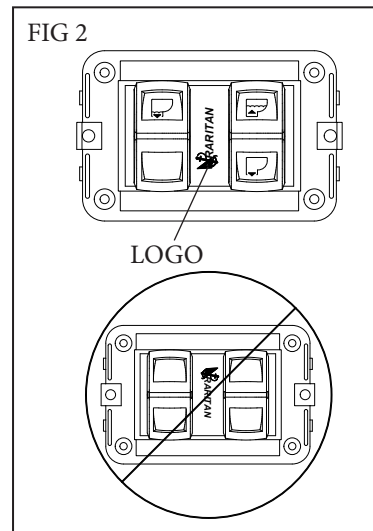
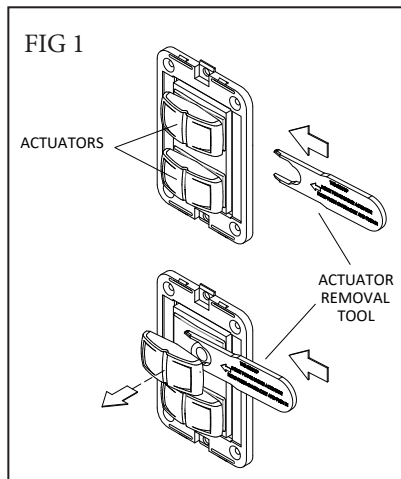
### HORIZONTAL INSTALLATIONS

Before installing, remove Actuators using tool provided.

1. With removal tool in UP position and flush against bracket, push in under actuator until actuators pop off (FIG 1).
2. Rotate switch assembly where Raritan Logo is positioned, as shown at top of FIG 2. Insert new actuators until they engage.

### MOUNTING

1. Select a flat surface near toilet. There needs to be 2" (51 mm) depth from mounting surface (FIG 3).
2. Using a 1 3/4" (44 mm) diameter hole saw, cut two holes for switch clearance.
3. Place switch assembly on the wall and mark the 4 mounting screw locations. Drill 5/64" (2 mm) pilot holes for screws (FIG 4).
4. Connect wires to switches (see wiring section, page 3).
5. Attach switch assembly to surface using 4 screws included (FIG 5).
6. Place wall switch cover on switch assembly.



## Recommended Wire and Fuse/Circuit Breaker Sizes

### ATLANTES FREEDOM VORTEX VAC AND MARINE ELEGANCE

**Table 1-Sea Water Model (sizes based on both remote intake and discharge pumps amps added together)**

Units Voltage	Circuit Breaker/fuse size (amps)	Toilet Discharge Pump Amp draw	Remote Intake Pump Amp draw	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	30	18	10	10 AWG	8 AWG	6 AWG	4 AWG	4 AWG	2 AWG
24 VDC	20	10	5	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG

**Table 2- Pressurized Freshwater Model**

Units Voltage	Circuit Breaker/fuse size (amps)	Amp draw	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	25	18	10 AWG	10 AWG	8 AWG	6 AWG	6 AWG	4 AWG
24 VDC	15	10	16 AWG	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG

### SEAERA QC MODEL 162

**Table 3-Sea Water Model (sizes based on both remote intake and discharge pumps amps added together)**

Units Voltage	Circuit Breaker/fuse size (amps)	Toilet Discharge Pump Amp draw	Remote Intake Pump Amp draw	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	25	13	10	10 AWG	8 AWG	6 AWG	6 AWG	4 AWG	4 AWG
24VDC	15	7.5	5	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG

**Table 4- Pressurized Freshwater Model**

Units Voltage	Circuit Breaker/fuse size (amps)	Amp draw	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	25	13	12 AWG	10 AWG	10 AWG	8 AWG	6 AWG	6 AWG
24 VDC	15	7.5	16 AWG	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG

**Table 5 - Remote Intake Pump Only (Seawater and Seafresh Models)**

Units Voltage	Circuit Breaker/fuse size (amps)	Amp draw	10 feet	15 feet	20 feet	30 feet	40 feet	50 feet
12 VDC	15	10	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG	6 AWG
24 VDC	10	5	16 AWG	16 AWG	16 AWG	16 AWG	14 AWG	12 AWG

**WARNING: Hazard of Shock and Fire**

- Always use proper wire, wire connectors and fuse/circuit breaker. See Specification Chart.
- Secure wire properly.
- Do not connect appliances to toilet circuit.
- Make sure power is off before proceeding.
- Use proper wire terminals for all wire connections.

**NOTES: for Wiring**

1. Distances are from source to unit and back to source.
2. Distance from power source to remote intake pump MUST be included when determining total distance.
3. Recommended conductor wire minimum AWG (mm<sup>2</sup>) for 3% voltage drop.
4. Recommended conductor sizes are based on 105°C rated insulation. Single conductor (not bundled), refer to ABYC Standards for sizes with other insulation ratings.
5. For 120/240 VAC units, use 12VDC specifications from transformer to unit. See transformer instructions for further wiring details.

**CONVERSIONS**  
Wire - AWG to mm

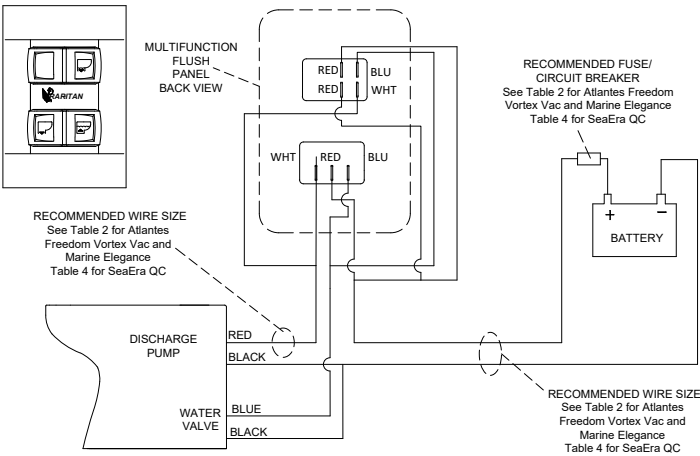
<b>AWG</b>	16	14	12	10	8	6	4	2
<b>mm</b>	1.5	2.5	4.0	6.0	10.0	16.0	25.0	35.0

**Feet to Meters**

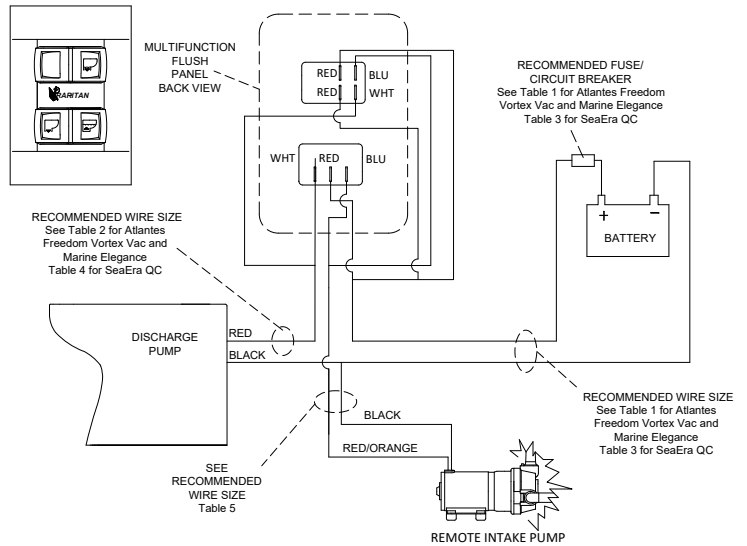
<b>Feet</b>	10	15	20	25	30	40	50
<b>Meter</b>	3.1	4.6	6.1	7.6	9.2	12.2	15.2

- Determine proper wire size by measuring distance from:
  - Power Source to control box and back to power source.
  - Remote pump units determine proper wire size for remote pump from wiring diagram.
- Select proper wire and fuse/circuit breaker size from Specifications on tables provided on page 3.
- Install fuse/circuit breaker in positive line at source.
- Wire control to the toilet and battery using one of the following wiring diagrams.

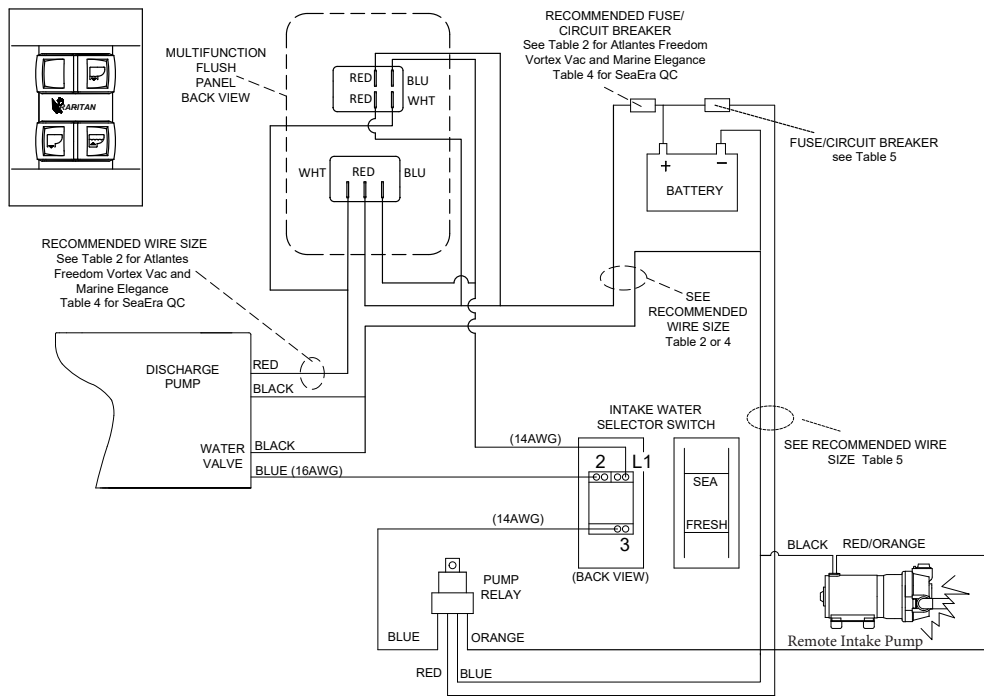
**FIG 6 WIRING FOR MULTIFUNCTION FLUSH PANEL FRESHWATER MODEL**



**FIG 7 WIRING FOR MULTIFUNCTION FLUSH PANEL REMOTE PUMP MODEL**



**FIG 8 WIRING FOR MULTIFUNCTION FLUSH PANEL, SEAFRESH MODEL**



**FOR LIMITED WARRANTY TERMS AND CONDITION PLEASE REFER TO TOILET MANUAL**



530 Orange Street, Millville, NJ 08332 USA  
 Telephone: 856-825-4900 FAX: 856-825-4409  
 www.raritaneng.com

Specifications Subject to Change Without Notice

Printed in U.S.A.