

Martin 16 Power-Assist System – Mk IV

Self-contained, portable, power-assisted steering and sail sheeting system



Power-Assist System – Mk IV

Self-contained, portable, power-assisted steering and sail sheeting system

...Gone Sailing!

The vision of the Martin 16 Power-Assist System is to get everyone out sailing. Men, women and children with significant disabilities use a Power-Assist System to enjoy the freedom of independent sailing, by providing power-assisted steering and sheeting for any tiller-steered sloop, through a familiar joystick or sip & puff interface.



The Martin 16 Power-Assist System is used by Martin 16 sailors around the world. As well, the Martin

16 Power-Assist System has been adapted to other tiller-steered sloops including the Sonar, Freedom 20, Cal 20 and Catalina 22.

Detailed information and Price List for the Martin 16 Power-Assist System modules can be found on www.martin16.com, as well as a full Operator's Manual.



Each year, I refine the function and capability of the system through feedback from sailors. Please provide us with your feedback and help us make the Martin 16 Power-Assist System even better.

Steve Alvey 403-870-7210
steve@martin16.com

www.martin16.com

Power-Assist System – Mk IV

Self-contained, portable, power-assisted steering and sail sheeting system

Power-Assist System – a Brief History

The idea for sip & puff controls for a sailboat came from Sam Sullivan, a quadriplegic and founder of the Disabled Sailing Association. Sam had seen high-quads operate their wheelchairs by sip & puff, and envisioned that this technology might be used to control a sailboat. The world's first sip & puff control system for a sailboat was designed by the Neil Squires Foundation (Vancouver, Canada) and installed on a Sunbird sloop the "Royal Spirit". The Royal Spirit debuted at the Mobility Cup regatta in 1994.

The sip& puff technology was refined and adapted to the new Martin 16 sloop in 1998 under the "Royal Bank Project". The Disabled Sailing Association of Alberta with the financial support of Royal Bank Financial Group managed this project. Steve Alvey brought a volunteer Project Team together, several companies donated parts and equipment, and a robust, self-contained system was designed and hand-manufactured to meet the needs of high-quad sailors. Steve Alvey and Mark Isaak have continued to advance the design, functionality and reliability, culminating in the current Mk IV Power-Assist System.



Power-Assist Systems are now in service at DSA programs and on private boats in Canada, USA, UK, Italy, Sweden, Israel, Netherlands, Japan, Greece, Australia and Puerto Rico. The Power-Assist System design is modular and versatile, and also used on the Sonar, Freedom 20, Catalina 22, Tripp 40, Cal 20, 2.4mR and Challenger Tri-maran, as well as Martin 16s.



Sailors with high-level disabilities use Power-Assist Systems to compete on the same starting line with able-bodied sailors. The Power-Assist System has changed the lives of these sailors, and more like them each new season.

Power-Assist System – Mk IV

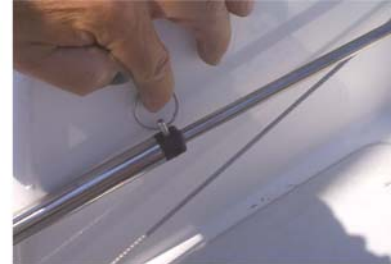
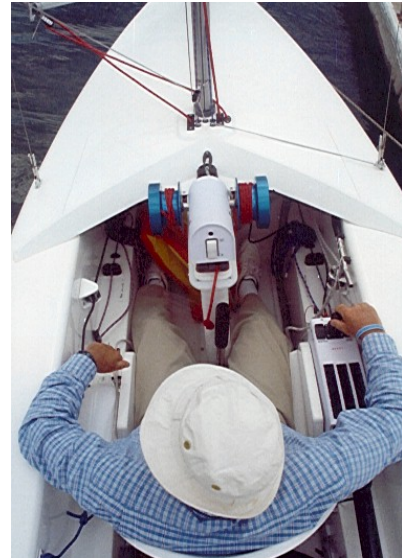
Self-contained, portable, power-assisted steering and sail sheeting system

Power-Assist Joystick Module



Self-contained, portable, weatherproof system components are intended for outdoor use in marine environment. The Power-Assist System can be installed in minutes on any standard Martin 16 sloop, or any other tiller-steered sloop (Freedom 20, Sonar, Catalina 22, etc.).

- ❑ **Power-Assist Joystick Module** contains the main control computer and a joystick control in a weatherproof enclosure. The Joystick Module is light and can be positioned comfortably beside the sailor – to the left or right – or on the sailor's lap if necessary.
- ❑ **L.E.D. battery meter** provides battery state indicator before and during your sailing session
- ❑ **Any 12V power source** can provide power to the Joystick Module: 1) the portable Power-Assist Battery Module or 2) a "house battery" on boats equipped with 12V DC power.
- ❑ **Emergency Disengage** of the drive motor in the case of system malfunction is provided via a "quick-release" pin that can be operated from the rear seat of the Martin 16. (Note: Emergency Disengage is NOT accessible to helmsperson).
- ❑ **Wireless RC Remote Control** (option) provides wireless control of the Power-Assist System, using a common and convenient two-channel RC Controller. The RC Remote Control may be used by a person sailing with a sip & puff sailor, or an Instructor in a motor boat. (specified at time of order).



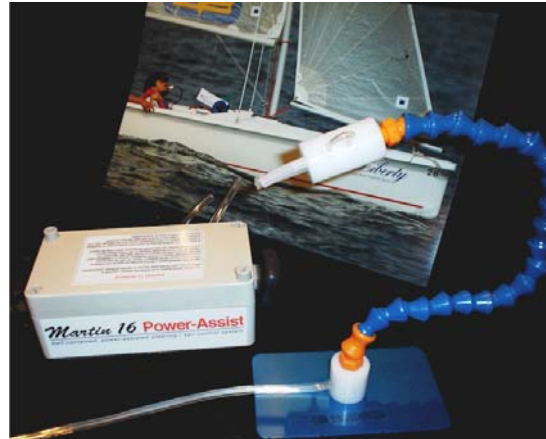
Power-Assist System – Mk IV

Self-contained, portable, power-assisted steering and sail sheeting system

Sip & Puff Module

- ❑ **Sip & Puff Module** provides a sensitive pneumatic control interface, allowing high-quadruplegic sailors to control the Power-Assist System functions using their breath.

The sip & puff interface is a chest-mounted control “stalk”. The stalk positions two pneumatic “straws” within reach of the sailor’s lips: one to control the HELM and one to control the WINDLASS.



- ❑ **‘Embedded’ or ‘Stand-alone’ operation** can be ordered (option). For programs, the Sip & Puff Controller can be “embedded” in the Mk IV Joystick Module, to offer Sip&Puff interface as sailors require it. Alternatively, competitive hi-quad sailors may prefer the “stand-alone” Relay Sip & Puff Module configuration. (configuration specified at time of order)
- ❑ **Any 12V power source** can provide power to the Sip & Puff Module: 1) the portable Power-Assist Battery Module or 2) a “house battery” on boats equipped with 12V DC power.



Power-Assist System – Mk IV

Self-contained, portable, power-assisted steering and sail sheeting system

M16 Windlass

- ❑ **Martin 16 Windlass** is a self-contained, portable power winch system for the main and jib sheets of any standard Martin 16 sloop. The Windlass may be used stand-alone or in conjunction with the Power-Assist Joystick or Sip&Puff Control Module. The Windlass installs in minutes on top of the Martin 16 keel, and main and jib sails are trimmed in unison via either a large toggle switch on the rear panel of the Windlass enclosure, or remotely by the joystick or sip & puff stalk (or Remote Control key fob).
- ❑ **Emergency Release** of the sheets in the case of system malfunction is provided on both winch drums via a “quick-release” pin that can be operated with minimum manual dexterity.
- ❑ **Any 12V power source** can provide power to the Sip & Puff Module: 1) the portable Power-Assist Battery Module or 2) a “house battery” on boats equipped with 12V DC power.

