



Omni+
ACM
JSM - sw
Chin
Dual



SPECIALTY CONTROL MODULES FOR PILOT+



PG DRIVES TECHNOLOGY



***A single
module for a
range of
specialty
controls***

The Omni+ Module is an advanced interface for the PG Drives Technology Pilot+ powerchair control system. This single, compact, stylish unit can connect to a wide variety of different specialist input devices, such as head controls and sip and puff. The device can then be used to control all driving, actuator and lighting functions of a powerchair, as well as supporting environmental controls. No longer are different interface modules needed for use with different types of input device, which simplifies and reduces the cost of wheelchairs fitted with special controls. The Omni+ Module acts as the “Joystick Module” in any Pilot+ system: all the normal Pilot+ battery charge, maximum speed, diagnostic and actuator information is indicated to the user by the Liquid Crystal Display (LCD). The LCD has been chosen for its excellent clarity and very wide viewing angle, which provides maximum flexibility in positioning the Omni+ Module on the wheelchair. The LCD technology also ensures full daylight visibility even in the very brightest sunlight. The versatility of LCDs means that many additional special functions – over and above the normal wheelchair functions – can be displayed, such as scanner control and sip and puff pressures. As well as providing all conventional wheelchair control functions, the Omni+ Module supports latched driving and actuator operation. This means users who are unable to operate input devices for a prolonged period can control the wheelchair with short commands which latch the wheelchair drive or actuator operation. Two forms of latched driving operation are supported – stepped and cruise. Stepped allows the wheelchair speed to be controlled to one of five levels, whereas cruise gives a steady acceleration until the input device command is removed, a constant speed is then assumed.

ENVIRONMENTAL CONTROL

By connecting an Auxiliary Control Module (ACM) to the Pilot+ system, the input device may then be used to operate environmental controls or interface to a PC mouse. The ACM can be simply connected into any Pilot+ system, no special connectors or adaptations are required. The outputs from the ACM are via two 9 pin D-type connectors wired to the TRACE configuration. Because the outputs are isolated relay contacts, the ACM is compatible with the majority of infra-red, ultrasonic and PC interface modules currently available.

Omnit+ Module

One module compatible with many input devices

- Remote Joystick***
- 4/5 Switch Control***
- 3 Axis Switch or Proportional (Head Control)***
- Sip and Puff***
- Single Switch Scanner***

Stylish, integrated package

Clear, easy-to-read LCD screen

Direct connection to Pilot+ system

Controls all wheelchair functions

Facility for environmental controls

Compatible with existing input devices

Extensive safety features

On board programming

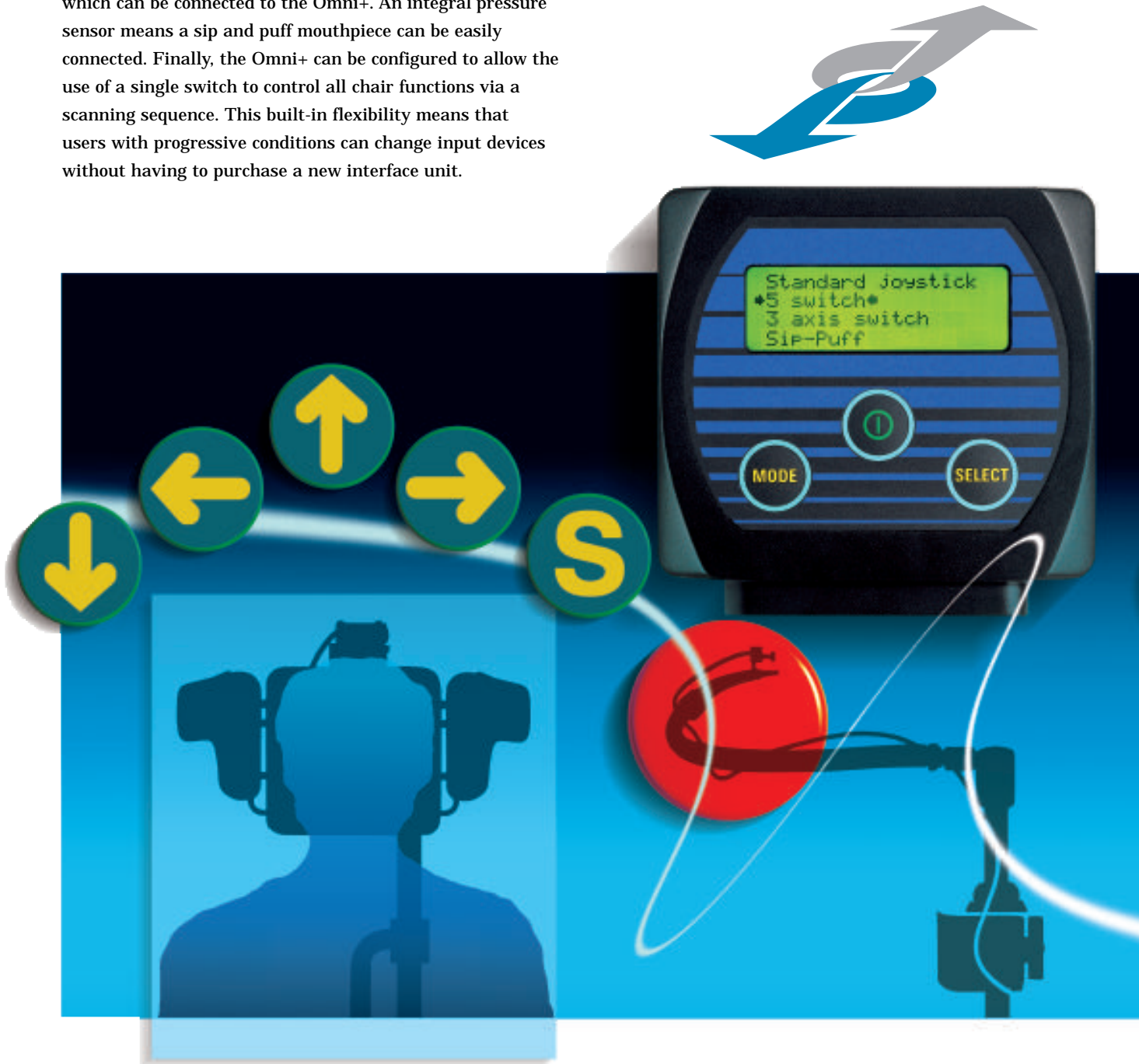
- no PC required



MULTIPLE INPUT DEVICES

Many different types of input device are supported by the Omni+ Module. A remote joystick used in conjunction with a single switch can offer an elegant chin solution which controls all chair functions. Four or five switch control systems configured as hand or foot controls can be connected, again covering all chair functions. Many head controls are based on three-axis switched or proportional systems, both of which can be connected to the Omni+. An integral pressure sensor means a sip and puff mouthpiece can be easily connected. Finally, the Omni+ can be configured to allow the use of a single switch to control all chair functions via a scanning sequence. This built-in flexibility means that users with progressive conditions can change input devices without having to purchase a new interface unit.

PG Drives Technology can supply a remote joystick for use with the Omni+ Module, as well as a range of switches from well known manufacturers. For further information on the availability of input devices, please contact PG Drives Technology's Sales Department.



**Simple
installation
and
programming
- easy change
of input
devices**



ON-BOARD PROGRAMMING

Because of the universal nature of the Omni+ Module, there are many configuration options dependent on the type of input device or the user's individual requirements. All normal parameters such as speeds, acceleration and braking are programmed in the normal way for a Pilot+ system via a PPI Programmer. However, the parameters which are special to the Omni+ Module are all accessed via the Mode and Select buttons on the front panel.

These buttons are used to select and make adjustments to a clear on-screen menu. There is no need for a PC or specialist software, meaning that adapting a chair is simple and cost-effective. To further ease the set-up process, all installation and programming is supported by comprehensive product literature.

SAFETY FIRST

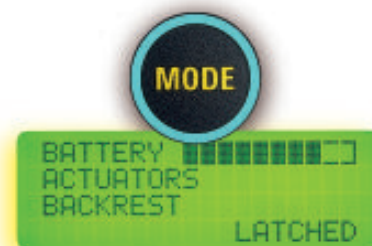
As with all PG Drives Technology's products, user safety was the utmost consideration during the Omni+ Module's specification and development. All module input circuits have been designed so that if the input device becomes disconnected the situation can be detected and a safe condition will result.

For example, if the switch used for emergency stopping becomes accidentally disconnected the Omni+ Module will automatically stop, thus preventing the system being used with a non-functional emergency stop device.

While the Omni+ Module is being operated in latched mode, a time-out function is included which means the input device has to be operated at regular intervals to continue driving or moving an actuator. Additional to these specialty safety features, the Omni+ Module has been designed to meet ISO7176/14 and EN12184. Documentation packages are also available to support powerchair submissions to any of the regulatory bodies in the USA or for CE marking in Europe. EMC, as always, has been a factor in the design of the module and as a result of PG Drives Technology's own EMC laboratory an extremely robust product has evolved.



The On/Off button applies power to the Omni+ Module and enters wheelchair driving mode. There is also facility for a remote operated On/Off switch.



The Mode button selects different wheelchair operating modes, such as actuator control, lighting control or environmental control. There is also facility for a remote operated Mode switch.



The Select button is used to enter the Omni+ Module on-board programming menu. Wheelchair specialty control functions can then be set to the requirements of individuals.



JSM-sw

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JOYSTICK MODULE WITH SWITCHES

For users who cannot operate the On/Off and Mode switches on a standard Pilot+ Joystick Module, but for whom a full Omni+ system is not required, an intermediate solution using a standard Joystick Module with provision for large external switches may be appropriate. A standard Pilot+ Joystick Module is fitted with two 3.5mm/1/8" jack sockets into which larger external switches can be connected and then located in any position on the wheelchair.

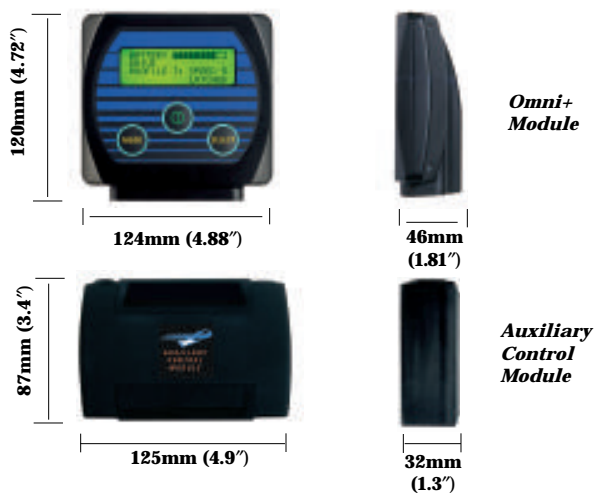
CHIN MODULE

The Pilot+ Chin Module allows control of all wheelchair drive and actuator functions. The module is extremely versatile offering independently height adjustable on/off and mode switches, variable joystick forward direction and a selection of specially designed chin cups and balls. TruCharge display, speed display, actuator display, programming, charging and locking are also included. This module can also be used in Attendant Only and Tray applications.

DUAL ATTENDANT MODULE

The Dual Attendant Module allows the powerchair to be controlled either by the user or from the rear by an attendant. Control is easily exchanged via a push-button and the attendant can also alter the maximum speed of the chair to a comfortable walking pace. The mode of operation and speed setting are clearly indicated to the attendant with a selection of LEDs.

DIMENSIONS



PRODUCTS

Omni+ Module

Backlit LCD screen
 TRACE standard inputs
 Analog inputs
 Joystick
 3 axis proportional
 Digital Inputs
 4/5 switch
 3 axis switch
 Single switch scanner
 Mode/Stop switch input
 On/off switch input
 Sip/puff pneumatic port
 Charger/Programming/Security key socket
 On-board programming

Omni+ Language Options

Omni+ N.Europe:
 English, Dutch, French, German
 Omni+ Scandinavia:
 English, Danish, Norwegian/Swedish, Finnish
 Omni+ S.Europe:
 English, Italian

Input Devices

Remote Joystick:
 Joystick and red Tash Buddy button.
 Further information
 available from PG Drives Technology

Pilot+ Auxiliary Control Module (ACM)

2 x 4 relay channels
 TRACE standard outputs

Joystick Module with Switches (JSM-sw)

Pilot+ JSM, see Pilot+ brochure.
 3.5mm/1/8" jack sockets
 for On/Off and Mode
 Green Tash Buddy Button
 Yellow Tash Buddy Button
 Dimensions 158mm ¥ 151mm ¥ 77mm
 6.2" x 5.9" x 3.0"

Pilot+ Chin Module

Independent switch height adjustment
 Variable joystick orientation
 On/off switch
 Mode switch
 TruCharge
 Charging/Programming socket
 Security lock
 Actuator display
 Dimensions 124mm ¥ 118mm ¥ 98mm
 4.9" x 4.6" x 3.9"

Pilot+ Dual

Connections to JSM and Power Module
 User/Attendant push-buttons and LEDs
 Speed control pushbutton and LEDs
 Dimensions 125mm ¥ 119mm ¥ 64mm
 4.9" x 4.7" x 2.5"

SPECIFICATIONS

Supply Voltage: 24VDC nominal
 Reverse Battery Protection: 40VDC
 Operating Temperature: -25°C to +50°C
 Storage Temperature: -40°C to + 65°C
 Moisture Resistance: IP54
 Safety: Multiple hardware & software strategy
 Designed to ISO7176/14.
 Documentation for approvals applications.
 0.5A @ 24VDC

ACM Outputs



Certificate No FM 21061

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