SUNRISE MEDICAL

SWITCH-IT

247749 Rev. F

Switch-It® Dual Pro® Head Array Owner's Manual

SUNRISE MEDICAL LISTENS

Thank you for choosing a Switch-It product. We want to hear your questions or comments about this manual, the safety and reliability of your system, and the service you receive from your Sunrise Medical authorized dealer. Please feel free to write or call us at the address and telephone number below:

in North America:
SUNRISE MEDICAL (US) LLC
Customer Service Department
2842 N. Business Park Avenue
Fresno, CA 93727 USA
(800) 333-4000
(800) 300-7502
www.SunriseMedical.com

in United Kingdom:
SUNRISE MEDICAL LTD.
Sunrise Medical Ltd.
Thorns Road
Brierley Hill
West Midlands
DY5 2LD
England
Phone: 0845 605 66 88
Fax: 0845 605 66 89
www.SunriseMedical.co.uk

www.SunriseMedical.com/register

Be sure register your product, and let us know if you change your address. This will allow us to keep you up to date with information about safety, new products, and options to increase your use and enjoyment of the product.

You can also register your product at: www.SunriseMedical.com/register

FOR ANSWERS TO YOUR QUESTIONS

Your Sunrise Medical authorized dealer knows your wheelchair best and can answer most of your questions about system safety, use, and maintenance.

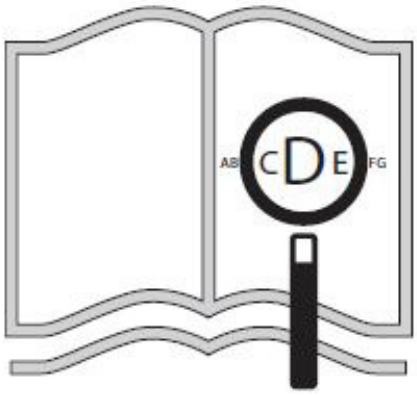
For future reference, please fill in the following:

Dealer: _____

Address: _____

Telephone: _____

Serial #: _____ Date/Purchased: _____



If you are visually impaired, this document can be viewed in PDF format at **www.SunriseMedical.com**

ADDITIONAL INFORMATION YOU SHOULD KNOW

No component of this product was made with Natural Rubber Latex.

DISPOSAL AND RECYCLING INFORMATION

When this product reaches the end of its life, please take it to an approved collection or recycling point designated by your local or state government. This product is manufactured using a variety of materials. Your product should not be disposed of as ordinary household waste.

You should dispose of your product properly, according to local laws and regulations. Most materials that are used in the construction of this product are fully recyclable.

The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is disposed in a manner that protects the environment.

Ensure you are the legal owner of the product prior to arranging for the product disposal in accordance with the above recommendations.

Dealer signature and stamp

NOTE: Check all parts for shipping damage. In case of damage DO NOT use. Contact Carrier/Sunrise Medical for further instructions.

⚠ WARNING!

DO NOT install this equipment without first reading and understanding this manual. If you are unable to understand the Warnings, Cautions, and Instructions, contact a qualified clinician or Sunrise Medical authorized dealer - otherwise injury or damage may occur.

⚠ WARNING! 

This device can be affected by Electro-Magnetic Interference (EMI) and Radio Frequency Interference (RFI).

1. Radio wave sources, such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect powered control.
2. If unintended movement or brake release occurs, turn the power wheelchair OFF and do not operate until inspected, repaired, and/or replaced.
3. If the chair acts in an erratic manner, turn the power wheelchair OFF and do not operate until inspected, repaired, and/or replaced.
4. If the joystick stem is damaged, it can cause the chair to operate erratically. Turn the power wheelchair OFF and do not operate until inspected, repaired, and/or replaced.
5. If any of the device cabling becomes frayed, cut, or disconnected in any way, turn the power OFF and do not operate until inspected, repaired, and/or replaced.

USER INFORMATION

Congratulations on choosing a Switch-It product. Sunrise Medical's high-quality mobility products are designed to enhance independence and make your everyday life easier.

As a part of our ongoing product improvement initiative, Sunrise Medical reserves the right to change specifications and design without notice.

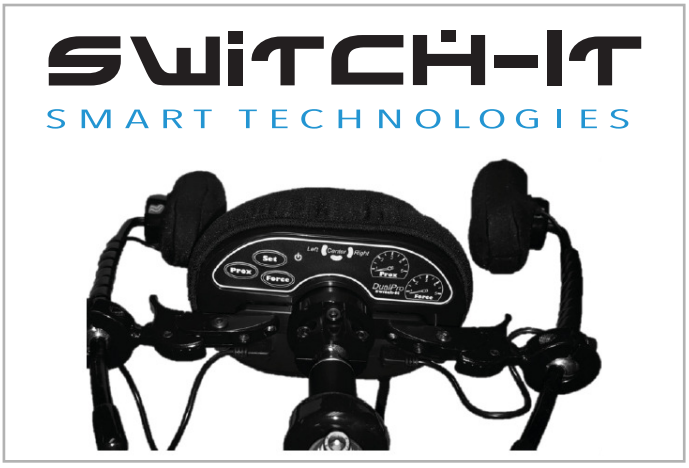
This user manual

This user manual will help you to use and maintain your product safely.

Area of application: The User

The controls for power wheelchairs are exclusively for a user who is unable to walk or has limited mobility, for their own personal use indoors and outdoors, and thus requires a power wheelchair. Driving a powered wheelchair requires cognitive, physical, and visual skills. The user must be able to estimate and correct the results of actions when operating the wheelchair.

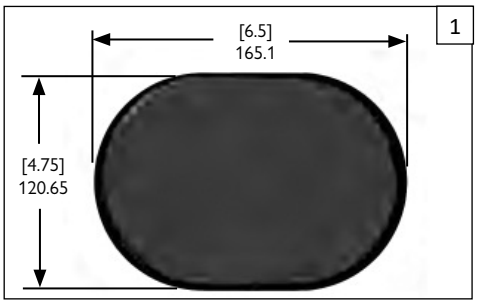
The user must be informed of the contents of this user manual before driving the wheelchair. In addition, the user of the wheelchair must be given thorough instruction by a qualified specialist before he or she participates in traffic. The first sessions in the wheelchair should be practiced under the supervision of a trainer/adviser.



A. Product description

The Dual Pro® is a fully adjustable, truly proportional head array with "On Board Programming" which allows for fine-tuned adjustments and customization to provide the user with an easy-to-learn, precise, and intuitive driving experience. The Dual Pro contains a combination of proximity and force sensor technologies. This patented technology allows the user to operate their wheelchair using the full range of the wheelchair's speed and acceleration parameters which may be customized in the field. Traditional switched head arrays do not allow this level of customization. The Dual Pro is available with either long "facial" pads or round "spot" pads.

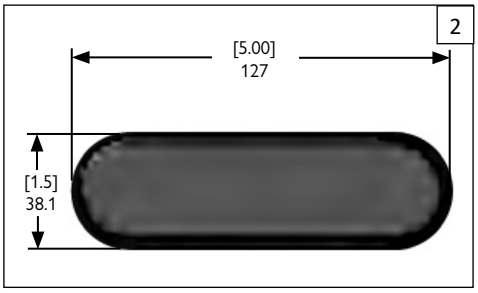
The intended lifetime of this product is 5 years.



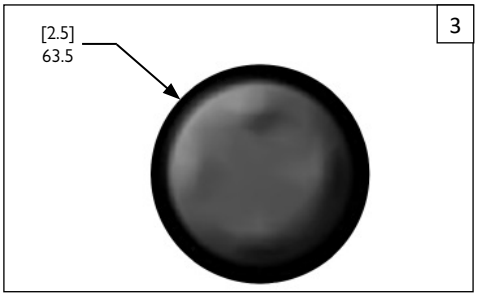
Dual Pro back pad (DPA and DPP Versions)

B. Technical information

- Alternative Control type: Proportional
- Activation type: Proximity and Force
- Activation surface:
  - DPA: 4-in x 2-in (100mm x 50mm)
  - DPP: 2-in x 1-in (50mm x 25mm)
- Activation force: Adjustable
- Sensing distance: 10 mm
- Feedback: Power wheelchair movement
- Connector type: D-Sub 9 connection to wheelchair display
- Dual Pro pad dimensions (Fig. 1- Fig. 3):
  - Back pad: 6.5-in x 4.75-in (165mm x 120mm)
  - Long "Facial" pads: 5-in x 1.5-in (127mm x 38mm)
  - Round "spot" pad: 2.5-in (63.6mm) diameter



Dual Pro (DPA Version) side "Facial" pad



Dual Pro (DPP Version) side "spot" pad

C. Compatibility

- Penny & Giles R-Net electronics: Omni module is required
- Curtis Electronics Enable 50: Enhanced display is required
- Dynamic Controls DX2: Switch-It DX Dongle (DXD) is required

Key features

Unique to the Dual Pro is its ability to be programmed to behave as:

- A **switched control,** which operates based on the distance of the head from the sensor.
- A **proportional control** which operates based on the force or pressure applied to the sensor.
- A combination of both **switched and proportional controls**, offering a precise and intuitive driving experience (Fig. 4).

The Dual Pro is a true proportional drive control that, like a gas pedal and steering wheel, offers a full range of acceleration and deceleration, 360° turning range, and veering control.

The Dual Pro has three 1/8-in jackports (called "SmartJacks") for external switches: mode, reverse, and an assignable user switch. These are located on the bottom of the back pad and are compatible with common electronic and mechanical switches with a mono or stereo plug output (i.e. egg switch, micro lite switch, etc.). A few of the most popular configurations include a proximity sensor mounted in a flexible gooseneck (Fig. 5), and a piko switch mounted on a rigid rod (Fig. 6).

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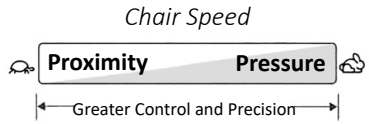

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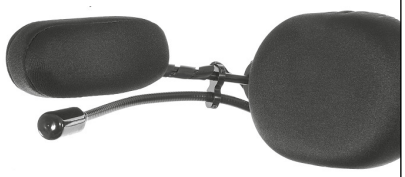

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E. Sensitivity

The Dual Pro can be programmed conveniently from the back pad of the head array (Fig. 8) allowing for simple set-up and in-field adjustments with the client in the wheelchair. Each pad of the Dual Pro has a force and proximity sensitivity setting: more lights on Force means more force is required to reach full speed, and more lights on Proximity means the user will achieve more speed when within range of the proximity sensor.

It is recommended the chair speed settings are set to 100% and fine tuning adjustments made through the Dual Pro individual pad settings. This is because the Dual Pro will send a signal to the chair as a percentage of full speed. Each light on Force and Proximity equals approximately 20% of the programmed speed for that profile.

F. Calibration

The Dual Pro contains a tilt sensor feature which disables the back pad when the user is in a pressure relief position. The angle at which the tilt sensor activates is also customizable and should be set at a point between a good driving inclination and a good tilt inclination (Fig. 7).

1. Regular Driving Angle
2. Tilt Sensor Activation – Back Pad Disabled
3. Pressure Relief Angle
4. To set the Inactivate back pad angle:
   a. Tilt the chair to the angle where you would like the back pad to become inactive.
   b. Hold down the "Set" button on the DualPro and power cycle the chair.
   c. Now, when the chair tilts back past this angle the back pad will become inactive.
   d. When the back pad is inactive the blue power symbol will blink.
5. To Disable this feature:
   a. Hold down the "Crawl" or "Prox" button.
   b. Power cycle the chair while holding.
   c. This feature is now disabled.

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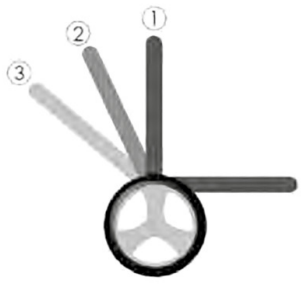

1. Regular Driving Angle
2. Tilt Sensor Activation - Back Pad Disabled
3. Pressure Relief Angle

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G. Forward Driving Sensitivity

The Dual Pro can be easily programmed to adjust the forward driving directional sensitivity. This allows user-controlled adjustment to center the forward driving heading of the powered wheelchair.

Adjusting the forward driving directional heading:

1. During normal operation of the wheelchair, hold the Set and Prox buttons on the back pad. Dual Pro is now in the proper state to adjust the forward driving directional heading.
2. The Left and Right back pad LED indicators will blink continuously. In this state, the Force and Prox buttons can be used to adjust the directional heading.
   a. The Force button will adjust the directional heading to the right.
   b. The Prox button will adjust the directional heading to the left.
   c. Adjusting the heading will be displayed on the back pad through the Force and Prox gauge LED indicators.
   d. Settings more to the right will have an LED indicator show on the Force gauge.
      i. Higher values of the rightward heading will cause the Force gauge LED indicator to blink.
      ii. There are a total of ten settings for the forward driving heading that relate to rightward headings. The lowest rightward heading will show a Force gauge indicator solid at the number 1. The highest rightward heading will show a Force gauge indicator blinking at the number 5.
   e. Settings more to the left will have an LED indicator show on the Prox gauge.
      i. Higher values of the leftward heading will cause the Prox gauge indicator to blink.
      ii. There are a total of ten settings for the forward driving heading that relate to leftward headings. The lowest leftward heading will show the Prox gauge indicator solid at number 5. The highest leftward heading will show a Prox gauge indicator blinking at number 1.
   f. With a neutral heading neither gauge will have an active LED indicator.
   g. The default forward directional heading is rightward at number 4 with a solid Force gauge LED indicator.

   Note: Adjustment of settings will not wrap, meaning that at the most rightward heading, pressing the Force button will keep the heading in the same place; likewise, at the most leftward heading, pressing the Prox button will keep the heading in the same place.
3. The center pad can be used to test the forward heading. The left and right side pads will be unresponsive in this state, but the center pad can be used to drive forward with full proportional control.
4. Once the desired forward directional heading is reached, press the Set button to return the Dual Pro to its normal state of operation.

⚠ WARNING!

For Safety reasons, ensure that the controller performance settings are tested by the user initially at a slow speed and gradually increased until the maximum desired speeds and accelerations are reached.

1. BLANK	Most Left														Default Setting						Most Right
2. ADJUSTMENT	10 Left	9 Left	8 Left	7 Left	6 Left	5 Left	4 Left	3 Left	2 Left	1 Left	None	1 Right	2 Right	3 Right	4 Right	5 Right	6 Right	7 Right	8 Right	9 Right	10 Right
3. INDICATOR	Prox 5 Blinking Green	Prox 4 Blinking Green	Prox 3 Blinking Green	Prox 2 Blinking Green	Prox 1 Blinking Green	Prox 5 Solid Green	Prox 4 Solid Green	Prox 3 Solid Green	Prox 2 Solid Green	Prox 1 Solid Green	No Prox or Force Lights	Force 1 Solid Red	Force 2 Solid Red	Force 3 Solid Red	Force 4 Solid Red	Force 5 Solid Red	Force 1 Blinking Red	Force 2 Blinking Red	Force 3 Blinking Red	Force 4 Blinking Red	Force 5 Blinking Red

H. Troubleshooting

Issue: Back pad without function, left and right pads Troubleshooting functioning.

Common Reason: Tilt sensor is active. Check if blue power light is blinking BLUE. If so, the back pad is locked out. Follow steps below.

Solution: Disable the tilt sensor feature.

1. Press and continue to hold the Proximity button.
2. Turn the Omni or Enhanced Display OFF (continue to hold the Proximity button).
3. Turn the Omni or Enhanced Display ON (continue to hold the Proximity button).
4. Release the Proximity button only after the Omni or Enhanced Display has cycled ON completely.

The Power LED should now be solid BLUE.

If additional help is needed call Sunrise Technical Support at 1.800.333.4000.

I. Maintenance Tips

The wheelchair's lifespan is dependant on it being well maintained. For information concerning specifi c settings, maintenance, or repair work, please contact your Sunrise Medical authorized dealer.

Hygiene measures when being re-used:
Prior to the wheelchair being re-used, it must be carefully prepared. All surfaces which come into contact with the user must be treated with a disinfection spray.

To do this, you must use a disinfectant as authorised/recommended in your country, for rapid alcohol-based disinfection for medical products and medical devices, which must be disinfected quickly.

Please be aware of the manufacturer's instructions for the disinfectant you are using.

In general, a complete disinfection cannot be guaranteed on seams. We therefore recommend that you dispose of seat and back slings to avoid micro-bacterial contamination with active agents according to your local infection protection law.

Conditions For Safe Storage:
- Products should be stored in a dry place: at 20 – 75% Relative Humidity.
- Protect from direct sunlight and dust for long periods.
- Away from direct heat and at a temperature between 5°C (40°F) to 40°C (104°F)
- Position and stack the packaged products according to the "this side up" arrows on the packaging.
- If a package is high and narrow and therefore potentially unstable, ensure it is well secured on the pallet or in the racking, to prevent it from falling down.
- Do not stack anything on top of the packaged products when the "do not stack" mark on the packaging is shown.
- Product should never be stored outside and subject to the elements.

Warranty

Each Switch-It device is carefully inspected and tested to provide peak performance. Every Switch-It device is covered under a limited, express warranty.

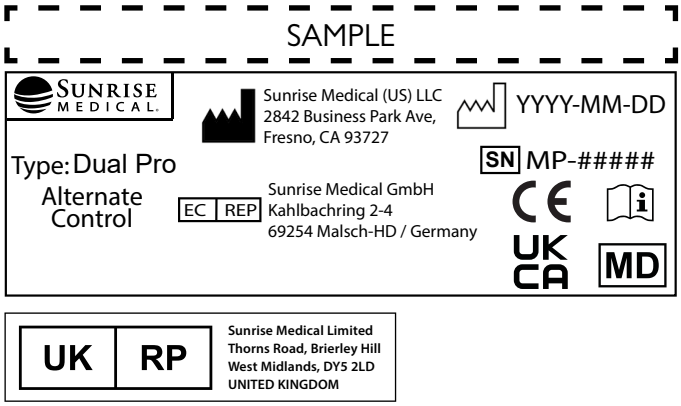
1. All **electronic components** are covered under warranty for twelve (12) months from the date of shipment, provided normal use, unless modified or damaged.
2. All **mounting hardware** is covered under warranty for twelve (12) months from the date of shipment, provided normal use, unless modified or damaged.
3. All **wearable items** (covers, pads, etc.) are covered under warranty for three (3) months from the date of shipment, provided normal use, unless modified or damaged.

Warranty claims should be processed through the nearest Sunrise Medical authorized dealer. A Return Authorization number must be obtained prior to returning the item for evaluation, along with details of the issue.

Items returned for warranty claim must be evaluated by Switch-It before warranty determination is made. Should a defect in materials or workmanship occur during the warranty period, and the item has not been modified or damaged, Switch-It will, at its option, rework or replace it without charge.

Except for express warranties made herein, all other warranties, including implied warranties of merchantability and warranties of fitness for a particular purpose, are excluded. There is no implied warranty beyond what is contained herein. Remedies for breach of express warranties herein are limited to rework or replacement of the goods. In no event shall damages for breach of any warranty include any consequential damages or exceed the cost of non-conforming goods sold.

Type:	Product Name/ SKU Number	MD	This symbol means Medical Device
SN	Serial Number		Manufacturer's address
XXXX-XX-XX	Date of Manufacture	EC REP	European Authorised Representative
CE	CE Mark	UK RP	UK Responsible Person
UKCA	UKCA Mark	CH REP	Swiss Representative's address
	Consult instructions for use		Importer's address



The management system of SUNRISE MEDICAL is certified to EN ISO 13485 and ISO 14001.

We at SUNRISE MEDICAL have been awarded the ISO-13485 certificate, which affirms the quality of our products at every stage, from R & D to production. This product meets the requirements in accordance with EU and UK regulations. Options or accessories shown are available at extra cost.

The varieties of fitting variants, as well as the modular design, mean that it can be used by those who cannot walk or have limited mobility because of:
- Paralysis
- Loss of extremity (leg amputation)
- Extremity defect deformity
- Joint contractures/joint injuries
- Illnesses such as heart and circulation deficiencies, disturbance of equilibrium or cachexia as well as for elderly people who still have strength in the upper body.

The wheelchair shall not be used in case of:
- Perception disorder
- Imbalance
- Seating disability

NOTE: General user advice. Not following these instructions may result in physical injury, damage to the product or damage to the environment!

Notice to the user and/or patient: any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

CE As the manufacturer, SUNRISE MEDICAL, declares that this product conforms to the Medical Device Regulation (2017/745).

UKCA As the manufacturer, SUNRISE MEDICAL, declares that the product conforms to the UK Medical Devices Regulation 2002 No. 618.

B4Me special adaptations
Sunrise Medical strongly recommends that in order to ensure that your B4Me product operates, and performs as intended by the manufacturer; all the user information supplied with your B4Me product is read and understood, before the product is first used. Sunrise Medical also recommends that the user information is not discarded after reading it, but it is kept safely stored for future reference.

Medical Device Combinations
It may be possible to combine this Medical device with one or more other Medical Device or other product. Information on which combinations are possible can be found at www.Sunrisemedical.co.uk. All combinations listed have been validated to meet the General Safety and Performance Requirements, section 14.1 of the Medical Device Regulation 2017/745.

Guidance on the combination, such as mounting, can be found at www.SunriseMedical.co.uk.

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