Power Unit User Manual

P/N 00081520

1000VA Unit

Compumedics Neuroscan

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USA

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For Technical Support.....

If you have any questions or problems, please contact Technical Support through any of the following routes.

If you live outside the USA or Canada, and purchased your system through one of our international distributors, please contact the **distributor** first, especially if your system is under warranty.

In all other cases, please use **techsup@neuro.com**, or see the other Support options on our web site (*http://www.neuro.com/neuroscan/support.htm*).

Or, if you live in the USA or Canada, please call **1-800 474-7875**. International callers should use **915-845-5600, ext 223**.

For Sales related questions, please contact your local distributor, or contact us at **sales@neuro.com**.

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Device Classification

ATTENTION: CONSULT ACCOMPANYING DOCUMENTS BEFORE USING

The Power Unit Model 8122 isolated transformer assembly is a line-powered instrument designed to meet the applicable requirements of IEC601-1:1988. The Power Unit should be used only according to the manufacturer's instructions. Replacement parts and accessories may be obtained from the manufacturer.

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There is no guarantee that interference will not result from operation of this device in proximity or connected to some other device. If interference occurs, the user or operator is encouraged to try and correct the interference by one or more of the following measures: (1) Change the orientation of the two devices relative to one another. (2) Increase the separation between the two devices. (3) Check the power source and grounding for the two devices. (4) Consult the dealer, Neuroscan Technical Support, or an experienced technician for help.

Classification per IEC601-1:1988

The device is ordinary equipment not protected against ingress of water and should not be used in the presence of any spilled liquids. It is not designed to be suitable for use in the presence of a flammable anesthetic mixture of air and oxygen or nitrous oxide. The device is capable of continuous operation.

Class and degree of protection against electrical shock is Class 1, Type B.

Technical Description

Input:	120/230~, 50-60Hz, 1000VA	
Fuses:	2 each T5A 250V 5 X 20mm for 230V operation	
	2 each T10A 250V 5 X 20mm for 120V operation	

Power Unit

Weight:	12.5 kg	
Dimensions	Height:	22.6 cm
	Width:	11.6 cm
	Depth:	27.9 cm

Shipping and Storage Maximum Limits

-20° C to +70° C, 10% to 100% humidity, non-condensing RH, 500 hPa to 1060 hPa. After unpacking, allow devices to adjust to room temperature for at least two hours prior to interconnection and application of power.

Operational Limits

+15°C to +30°C, 25% to 95% humidity, non-condensing RH, 700hPa to 1060hPa pressure.

Warnings and Precautions

Instructions
Read instructions before operating the device.

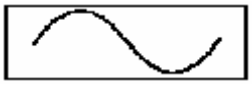
Symbols
The following symbols are found on the Power Unit:

Attention! Read instructions before using!

Attention! Veuillez vouz préferér au manuel du produit
pour l'utilisation et les instructions de mainten!

This apparatus is a Type B device.

Cet apparail est un equipement de Type B.



Volts AC

The Power Unit operates using line voltages which are present inside the enclosure. CAUTION: To reduce risk of electric shock, do not remove cover. Refer servicing to qualified personnel.

This device is not equipped with appropriate alarms required for use in monitoring clinical parameters of a patient where it is necessary to alert the user of situations which could lead to death or severe deterioration of the patient's state of health.

DANGER: Risk of explosion if used in the presence of flammable anesthetics, or other flammable gases or liquids.

NOTE: **USA and Canada**: Grounding reliability can only be achieved when this equipment is connected to a receptacle marked "Hospital Only" or "Hospital Grade".

CAUTION: Grounding continuity should be checked periodically.

CAUTION: This product requires convection cooling. Adequate ventilation is required. Clearance of 2" minimum on any side.

CAUTION: To reduce the risk of electrical shock, do not open enclosure. No serviceable parts inside.

DANGER: Risques d'explosion si cet apparail est utilisé à proximité d'anesthesiques inflammables ou en présence de gaz ou de liquides inflammables.

REMARQUE: **USA et Canada**, la fiabilité de la mise à la masse de cet équipment ne peut ètre réalisé que si celui-ci est connecté à une price marquée "Hôpital Suelement" ou "Classe Hôpital".

ATTENTION: Ce product doit ètre refroidit par convection. Une ventilation appropriée est indespensable. Un espace de 2" (5cm) doit ètre laissé libre de chaque côté.

ATTENTION: Pour réduire les risques de choc électrique, ne pas ouvrir le bôitiér de protection. Aucune functionalite necessaire à l'utilisateur ne se trouve a l'intérieur.

Environment

The Power Unit is designed to be used in a clinical laboratory or office environment. Extremes of humidity, temperature, or pressure should be avoided. The device should not be used in a location where contact with liquids is possible, and if liquids are spilled on or in the area of the device, it should not be used until it can be ensured that the fluid or its residue will not affect device operation. Questions should be directed to the manufacturer or its representatives.

Cleaning Instructions

The Power Unit enclosure may be cleaned with a damp sponge or cloth and mild nonabrasive cleanser. Take care to ensure that liquid does not spill in or on the device. Do not use abrasives or detergents.

Repair

There are no user serviceable parts in the Power Unit transformer. Fuses in the Power Unit should be replaced with the type and rating indicated on the back panel label. Contact your dealer or Neuroscan Technical Support if you believe the Power Unit is in need of repair.

Maintenance

Neuroscan suggests that the earth and patient leakage currents be tested at least once per year to ensure continued safe use of the device. Also at least once per year, visually inspect the device, including the power cord. Replace any worn or frayed cables, and contact your dealer or Neuroscan technical support if you have concerns about what you see. This inspection interval may be shortened for devices that are moved often or experience unusually heavy use. No other maintenance or service is required.

Installation Precaution

Proper grounding is important for continued safe use of your Power Unit. Ensure that the outlet supplying power to the Power Unit is grounded, and that the power cords supplied with your system are used. Other devices in the same patient area should be at the same ground potential, and should preferably use the same branch circuit.

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Interconnection with Other Devices

Care should be taken when multiple devices are connected to a patient, or when devices are connected together. Leakage currents for individual devices may sum to values higher than expected for single devices. In particular care should be taken when connecting Information Technology (computer) equipment to Medical equipment. Allowable leakage current levels for IT equipment are higher than for Medical equipment. All equipment that is electrically connected together must be powered from the isolation transformer.

Introduction

The Neuroscan Power Unit transformer is designed to provide isolated power to SynAmps^2 and other approved devices from Neuroscan (up to 1000 watts total output). The Power Unit may be operated from either 110 or 220 VAC power. The Power Unit is a flexible, dependable power source for many laboratory applications.

Power Unit Installation

Installation of the Power Unit is straightforward. Here is a summary of the steps that you will need to perform:

Unpacking the Power Unit

The Power Unit has been shipped in a container designed to reduce damage due to shipping. Please retain this box and its contents in case you need to return the unit for any reason.

The Power Unit is typically packaged in smaller box within a larger box containing other devices that have been purchased (such as the SynAmps^2 System Unit and headbox).

Open the box and check for the following contents:

1. Power Unit
2. Power Unit cord

As you remove the components from the boxes, examine them for any obvious damage due to shipment. Save the box in case you need to return the unit for repairs.

Connecting the Components

Turn off and unplug all computers, monitors, printers, etc. before connecting the Power Unit to the rest of the system.

The Power Unit provides isolation through a transformer from line power. Input and output voltages are selected via switches. All IT (Information Technology) devices attached to the system must be powered through the Power Unit.

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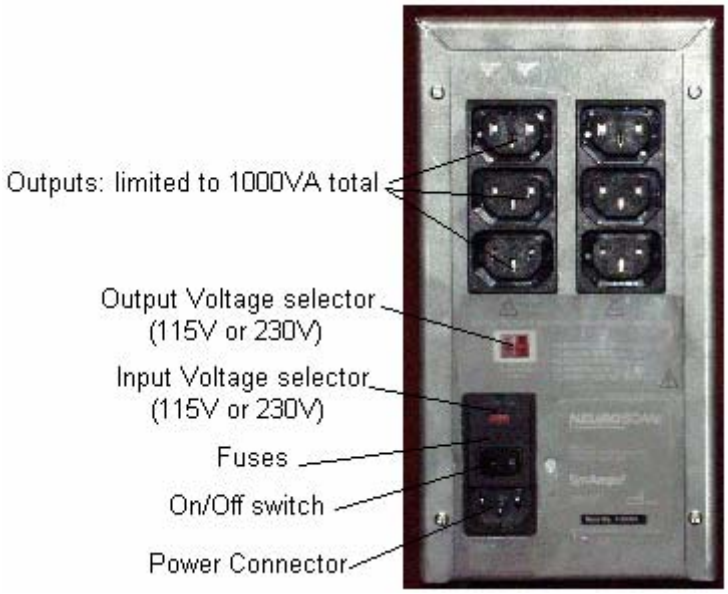

All components connected to the SCAN, STIM, SynAmps^2 *or other units MUST be powered by the Power Unit.* Connect the power cables to the computers, monitors, printer, STIM box, System Unit(s) or other devices to the upper power connectors on the back of the Power Unit. *Make sure you have the input voltage set correctly for 115 or 230 Volts, as well as the output voltage. If you have the output voltage set to 230V for a 115V device, damage may occur to that device.* Connect the AC power cable from the back of the Power Unit to a grounded AC wall plug. Verify that there is a true earth ground in the building (otherwise, you may experience 50Hz or 60Hz line noise interference in the recordings).

The Power Unit contains an isolation transformer that is rated at 1000 watts. While that should be sufficient to safely power the components mentioned, you should verify that you are not surpassing that limit. A fully loaded System Unit with four amplifier/headboxes attached consumes a maximum of 150W. The demand will come primarily from your computer(s), monitor(s) and any peripherals. The wattage demands are usually displayed on the back of the components (or in their documentation). Neuroscan is not responsible for damage to the Power Unit resulting from an overload.

After all of the components are connected, turn on the Power Unit first, then turn on the other components one at a time (to reduce the wattage demand on the Power Unit). After turning the Power Unit off, it is recommended to let the unit "cool down" for approximately one minute before turning it on again. There may otherwise be a risk of blowing a fuse in the unit or possibly tripping the wall outlet circuit breaker.

POWER UNIT SPECIFICATIONS

The Power Unit is intended for 120 or 230 VAC and 50/60 Hz input frequency. DO NOT USE OTHER VOLTAGES OR FREQUENCIES.

Output voltage (VAC)	Output current (Amps)	Output Power* (VA)	Leakage current 120V Nom/Max**	Leakage current 230V Nom/Max***
120/240	8.34/4.17	1000	50/100***	50/100***

* Maximum total output power of the Power Unit, whether one or more outlets are used.

** Nominal leakage current is measured at normal use and in no fault condition. Maximum leakage current is measured as Non-Patient connected, with reversed polarity and under single fault condition.

*** Maximum values, will be updated as actual values are available.

This transformer is a Class I, Type B device.

Power Cord Requirements:
Input: The power cord must be appropriately approved by testing agency for the country where the Power Unit is operated, such as UL/CSA/VDE/SEMKO/<HAR> etc. For the US and Canadian market, a HOSPITAL GRADE plug is required.

One end (plug) must be appropriate for the wall receptacle, the other to fit in the power inlet of the Power Unit; this end must be of appliance type, IEC-320 female plug. The power cord must have grounding.

Minimum wire diameter: AWG 16 (1.00mm^2)
Length recommended: Less than 12 feet

Fuse Requirements:
The Power Unit has been tested, approved and deemed safe under certain conditions. The fuse in the power entry module is protecting the Power Unit from overloads and short circuits. If the wrong fuse is used, there may be danger to person operating equipment connected to it, or, potential damage to equipment connected to the Power Unit. The fuses must be UL and CSA approved and marked for North American use and VDE/EN approved and marked for European use. Use only SLOW BLOW type (T-type) fuse in this equipment. We also recommend the fuses to be ceramic bodied.

120V in	240V in
10AT	5AT

DO NOT USE FUSES WITH HIGHER AMP RATING.

TROUBLESHOOTING

DO NOT ATTEMPT TO REPAIR. WARRANTY WILL BE VOID IF UNAUTHORIZED REPAIR WORK HAS BEEN CARRIED OUT.

No output power:

1. Verify that the Power Unit is connected and that the power switch is ON (1).
2. With all power in, and power out disconnected from the Power Unit, verify that the fuses in the power entry module are operating.
3. Use another wall outlet.
4. Check wall outlet circuit breaker.
5. If you have any other problems with the Power Unit, please contact Neuroscan (see page 2 for contact information).

If you notice **any** Mechanical Damage: Contact Neuroscan for return instructions (see page 2 for contact information).