



Advancing The Art Of Lighting

PS-600

PS-300

PS-150

Power Supplies

User Manual



PS-600 – Model 20600 (600 watts)
PS-300 – Model 20300 (300 watts)
PS-150 – Model 20150 (150 watts)

CONTENTS

Declaration of Conformity	3
Safety Information	4
Introduction	6
System Components.....	7
PS Power Supply.....	7
System Layout Diagram	8
Equipment Compatibility.....	9
Installing the Power Supply	10
Head-Feet Restrictions.....	11
Mounting and Installation Accessories	12
Infotrace	13
Cables	14
Specifications	15
Parts List	16
Exploded Parts Diagram	17
Warranty Information.....	20



DECLARATION OF CONFORMITY

Manufacturers Name: Wybron, Inc.

Manufacturers Address: 4830 List Dr., Colorado Springs, Colorado 80919 USA

Equipment Name: LX Power Supply

Equipment Model Numbers: 20600, 20300 and 20150

This product is in conformity with the following standards:

Referenced Safety Standard(s)

EN60598-1
EN60598-2-17

Referenced EMC Standard(s)

EN55022
EN61000

following the provisions of the EU LV Directive 73/23/EEC and the EU EMC Directive 89/336/EEC.

I declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Signature: *Kenneth Fasen*

Printed Name: *KEN FASEN*

Title: *VP of ENG.*

Date: *Jan 5, 2006*

Safety Information

SAVE THESE INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS

This manual gives step-by-step instructions for the preparation, setup, and operation of the PS Power Supply.

There is a potential risk of fire, electric shock or injury to persons if the product is not used as instructed.

WARNING: When using electrical appliances, use basic precautions, including:

- Read this manual before connecting power.
- Use supervision around children.
- Use in a dry location only.

The PS Power Supply is to be used in an indoor environment only and is not intended for residential use.

For continued protection against risk of fire, replace only with same type and rating of fuse.

Protection against electric shock is assured only if the mains connected power supply cord set is connected to a properly earthed grounding type receptacle.

An all pole disconnect device must be located adjacent to the unit or, if the AC cord is used as the main disconnect device, ensure that the socket-outlet is located/installed near the equipment and is easily accessible.

THE MAINS LEADS ARE COLORED IN ACCORDANCE WITH THE FOLLOWING CODE AND MUST BE CONNECTED IN THE FOLLOWING SCHEME:

- GREEN AND YELLOW: EARTH 
- BLUE: NEUTRAL
- BROWN: LINE

WARNING: THIS EQUIPMENT MUST BE EARTHED.

For questions, contact Wybron at 1-800-624-0146 or visit www.wybron.com.

Product Modification Warning

Wybron, Inc. products are designed and manufactured to meet the requirements of United States and International safety standards. Modifications to the products could affect safety and render the product non-compliant to relevant safety standards.

Notes de Sécurité

EPARGNER CES INSTRUCTIONS LIRE ET SUIVRE TOUTES INSTRUCTIONS

Ce manuel donne des instructions pour la préparation, l'organisation, et l'opération du le PS provision d'électricité.

Il y a un risqué de feu, décharge électrique, ou la blessure aux gens si le produit n'est pas utilise comme instruit.

AVERTISSEMENT: En utilisant des appareils électriques utilise la prudence fondamentale inclut:

- Lire ce manuel avant d'alimenter ou l'installation de l'accessoire.
- Utiliser la prudence près des enfants.
- Sécher l'emplacement seulement.

Le PS provision d'électricité va être utilise à la maison seulement et pas pour l'usage residential. Pour la protection continuée contre le risque de feu, remplacer seulement avec le même type et le même classement de fusible.

La Protection contre la décharge électrique est seulement assurée si la série de corde connectée principale est connectée à un convenablement terre de type.

Un appareil débranchant doit être localisé à côté de l'unité ou, si la corde de courant alternatif est utilisée comme le principal débranche l'appareil, S'assurer que la douille-sortie localise/installé près de l'équipement et est facilement accessible.

LES AVANCES PRINCIPAUX SONT CONFORMEMENT COLORES AU CODE SUIVANT ET DOIVENT ETRE CONNECTES DANS L'ARRANGEMENT SUIVANT :

- vert et jaune– terre (⊕)
- bleu – neutre
- marron – ligne

L'AVERTISSEMENT – CET EQUIPEMENT DOIT ETRE FONDE.

Pour les questions, Wybron de contact à 1-800-624-0146 ou visite www.wybron.com.

L'Avertissement de Modification de Produit

Les produits de Wybron, Inc. sont conçus et a fabriqué pour rencontrer les conditions d'Etats-Unis et de norms de sûreté internationaux. Les modifications aux produits pourraient affecter la sûreté et rendent le produit non-conciliant aux normes de sûreté pertinentes.

Introduction

Wybron's 150-, 300- and 600-watt PS Power Supply units attach easily to a truss or can be mounted into a 19-inch rack. A Power Supply unit can be controlled by one or several DMX512 channels that send DMX signals from the lighting console to each device along with 24 volts DC. Both the signal and the power travel along a single cable, eliminating the need for a separate power cable for each device.

Each unit provides power for Wybron's feedback-compatible IT products, which send feedback to their operators using Remote Device Management, an ESTA-standard two-way communication protocol.

System Components

Power Supply

The power supply accepts DMX512 from a lighting console and passes it along with 24VDC power to each device. This eliminates the need for separate control and power cables to each device. The DMX512 control signal can also be daisy chained to other PS power supplies or other DMX-controlled devices.



Caution: The PS Power Supply is compatible with Forerunner devices but NOT the RAM/Coloram II family of devices (i.e. Coloram II, CXI, Goboram II, etc.) DO NOT connect PS compatible devices to RAM/Coloram II Power Supplies, or RAM/Coloram II compatible devices to PS Power Supplies. Damage from such action will not be covered by the equipment warranties.

PS Compatible Devices

- Nexera LX
- Coloram IT
- CXI IT
- Forerunner
- Eclipse IT Iris
- Eclipse IT Shutter

Refer to the user manuals for detailed operating information on these products.

Power/Data Cable

The Power/Data Cable connects the Power Supply outputs to the connected devices and provides them with power and control signal. The cable uses 4-pin XLR connectors on either end and consists of two 14 AWG conductors and a 22 AWG twisted, shielded pair. See the “Cable” section of this manual for the pin-out.

PS Power Supply System Connection Diagram

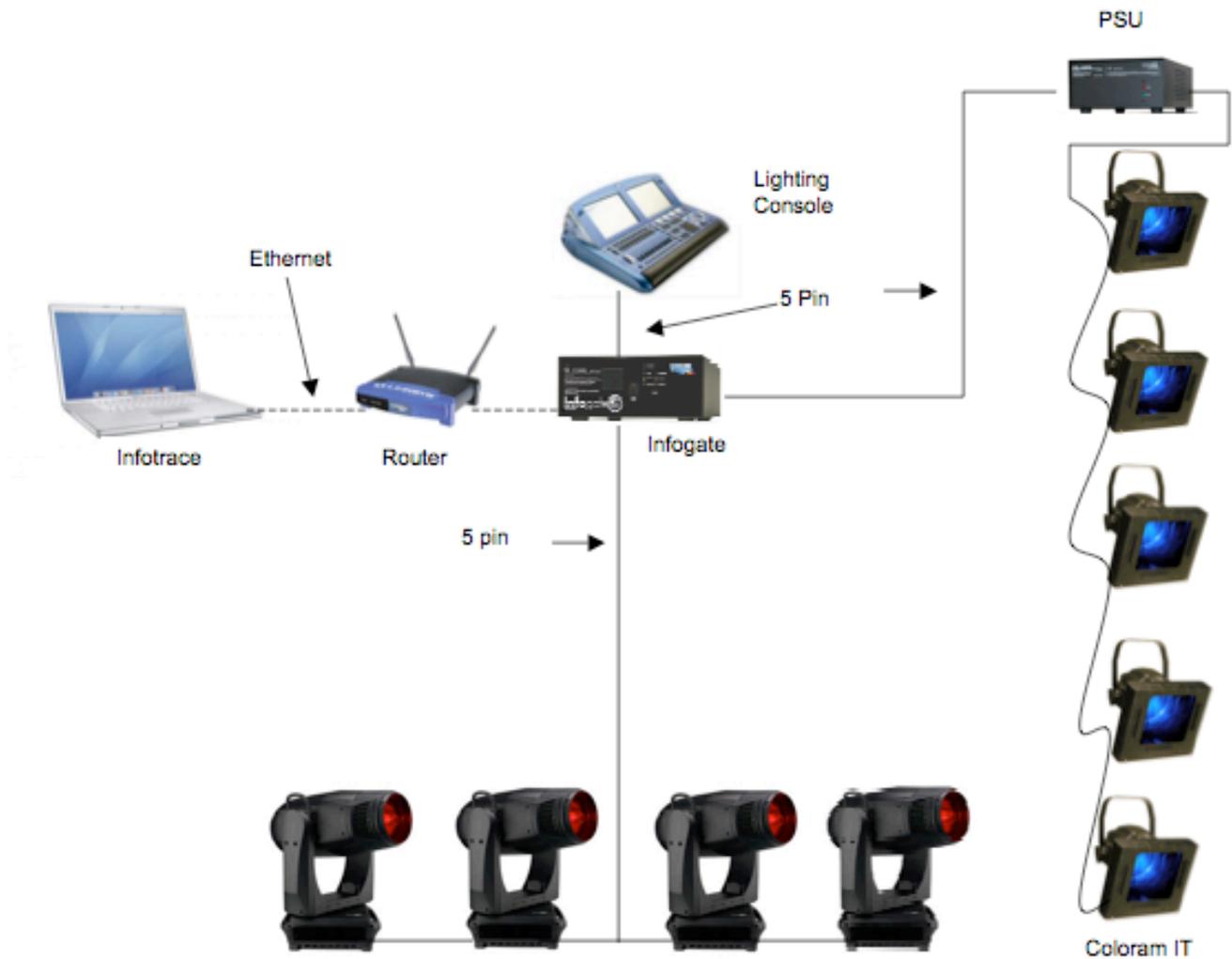


Figure 2

Equipment Compatibility

The following is a chart of compatibility and capacity of the various models of PS Power Supplies and their companion devices. This is current as of the print date of this manual. As more products are added to the compatible line, an updated list will be available on the Wybron Web site at www.wybron.com.

Power Supply		PS-150	PS-300	PS-600
Model Number		20150	20300	20600
Output Power		150 watts	300 watts	600 watts

Number of Units per Power Supply

<i>Description</i>	<i>Model</i>	<i>Maximum Head-Feet</i>	<i>PS-150</i>	<i>PS-300</i>	<i>PS-600</i>
Nexera LX Tungsten	82560, 82570 82640	1500	8	16	32
Nexera LX CDM	2580, 2600	1500	6	12	24
Forerunner 4" / 7"	4540 7140	1500	16	32	64
Coloram IT 4" / 7.5"	84520 87110	1500	6	12	24
Coloram IT 10"	810100	1000	4	8	16
Coloram IT Lg Fmt	816090	1000	6	12	24
Coloram IT 15"	815010	1000	6	12	24
Coloram IT 8 Light	816080	1000	6	12	24
Aquaram IT 7.5"	87080	1000	5	10	20
Aquaram IT 6 Light	816120	1000	6	12	24
Aquaram IT 8 Light	816080	1000	6	12	24
Aquaram IT Lg Fmt	85000	1000	6	12	24
Eclipse IT Iris 1K	87250	1500	6	12	24
Eclipse IT Iris 2K	812020	1500	6	12	24
Eclipse IT Shutter 1K / 2K	89020 811020	1500	8	16	32
Eclipse IT Shutter Lg Fmt (5K / 16")	817010	1500	6	12	24
Eclipse IT Shutter 24"	82401	1500	6	12	24
Eclipse IT Iris 24"	823020	750	3	6	12
CXI IT 4" / 7.5"	87200 816120	1500	6	12	24
CXI IT Lg Format	81605	750	2	5	9
CXI 12"	812210	500	4	9	18
CXI Mariner	87220	1500	6	12	24
CXI MultiPar	87240	1000	4	9	18

Installing the Power Supply

1. Mount the Power Supply

The Power Supply is designed to be freestanding, truss-mounted, or rack-mounted.

The Power Supply comes with a mounting bracket that hooks over the pipe or truss of your lighting rig and is locked into place with a thumb screw. If you use this mounting method, connect the Power Supply's safety cable by clipping it around the pipe or truss.

The Power Supply can also be mounted into a 19" rack using the optional rack mount kit. The rack mount kit will accommodate two units side-by-side.

2. Connect the Device to the Power Supply

Connect the device to the Power Supply using Wybron's 4-pin power/data cable.

Refer to the HEAD-FEET RESTRICTION section of the manual for details of the length of cable runs.

Note: The Wybron Power/Data Cable has been specially designed to minimize voltage drop. Use only Wybron-supplied cable.

3. Connect the Power Supply to AC Power

Plug the AC cord into a non-dimmed power circuit. The power supply automatically accommodates 100 – 240V ~ 50/60 Hz.



Caution: Do not power the Power Supply from a dimmed circuit. Severe damage will result and is not covered by product warranty.

A red LED (viewable from the stage) indicates power.

4. Connect and Set the DMX512 Source

Connect the DMX512 signal source to the DMX input connector on the front of the power supply using standard DMX cable. The presence of a valid DMX signal will be indicated by a flashing green LED.

Head-Feet Restrictions

The HEAD-FEET parameter is a method of accounting for the voltage drop in the power/signal cable caused by the current drawn by each device.

To help understand this issue, think of it as water pressure (voltage) in a hose (cable) where there are multiple water sprinkler heads (color changers). If the hose (cable) is too long, or there are too many sprinkler heads (color changers), the water pressure (voltage) will be too low.

HEAD-FEET is defined as "the sum of cable lengths from each device to a single power supply output."

For Head-Feet information on a specific Wybron product, please refer to that product's user manual.

Mounting and Installation Accessories

The following sections describe how to install and replace mounting accessories.

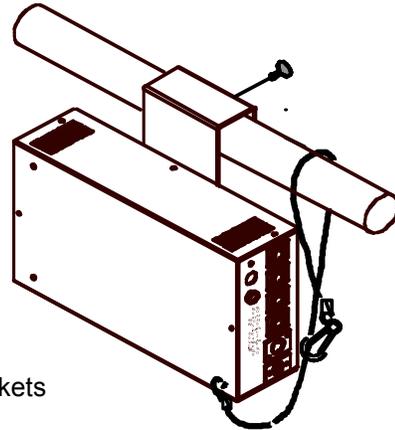
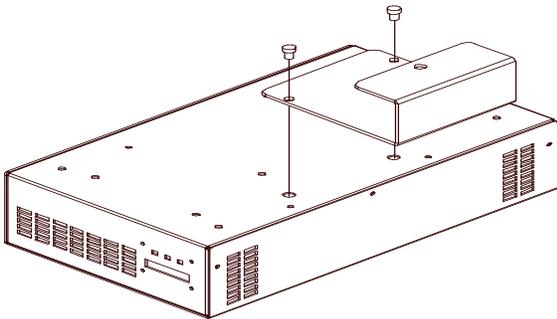
Power Supply Hanger Brackets

The Power Supply units are shipped with hanger brackets to allow pipe or truss mounting.

Follow these steps to install the hanger bracket.

1. Disconnect AC power from the power supply.
2. Place the power supply on its side on a flat surface.
3. Position the brackets as shown on the next page.
4. Attach the bracket using a 3/16" Allen wrench and the supplied screws.

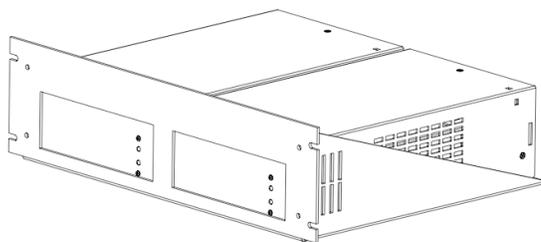
Note: Use the supplied thumb screws to clamp the hanger brackets to the desired pipe or truss.



Power Supply Hanger Brackets

Power Supply Rack Mounting

The rack mount accessory can be used with up to two Power Supplies and allows them to be mounted into a 19-inch rack.



Infotrace

Imagine checking your lighting equipment and diagnosing any problems without grabbing a ladder or strapping on a harness. It's possible with Wybron's award-winning **Infotrace Control and Management System**, which gives you the tools to manage your rig without leaving your computer. Using the feedback protocol Remote Device Management, or RDM, Infotrace enables you to inspect and address everything in your lighting system, managing it and knowing that it works.



The diagram above outlines Infotrace's key components, which include:

Infogate – The software and hardware required to facilitate the transfer and display of information.

Infochip – A conversion chip that can be used with non-RDM equipment to allow communication with the Infogate software.

Infostore – An Internet-based application that aggregates data captured by Infogate and allows for the accumulation of historical information related to the equipment performance in the installation.

IT Products – Coloram IT, CXI IT, Eclipse IT Iris, and Eclipse IT Shutter all have updated electronics to support RDM communication plus additional product improvements, including sensors to detect a variety of conditions.

The heart of the Infotrace system is Infogate — specialized software that uses RDM to facilitate remote addressing and diagnostics for potentially every piece of equipment mounted on a rig. Infogate works with all Wybron-manufactured IT products as well as RDM-compatible equipment from any other manufacturer.

Cables

Power/Data Cable

The power/data cable uses 4-pin XLR connectors on either end and consists of two 14 AWG conductors and a 22 AWG twisted, shielded pair. The shells of the two XLR connectors are not electrically connected together, preventing large power currents from flowing from chassis to chassis of the equipment. The twisted pair shield is connected at the male XLR connector end only.

XLR Pin #	Wire Color	Function	Size
1	White	Ground	14 AWG
2	Green	Data -	22 AWG
3	Red	Data +	22 AWG
4	Black	24VDC	14 AWG

DMX512 Control Cable

The DMX control cable from the lighting console to the power supply is a five-conductor cable with 5-pin XLR connectors on each end. The wiring pin-out is specified by the USITT DMX512/1990 standard.

XLR Pin #	Function
1	Common
2	Data -
3	Data +
4	Talkback -
5	Talkback +

Specifications

Connectors:

DMX in: Male 5-pin XLR

DMX out: Female 5-pin XLR

Output: Female 4-pin XLR

DMX512 termination: None – DMX signal pass thru

Fuse:

PS-600 (model 20600):

Input voltage: 100-240V ~ 50/60 Hz 10-5A

250V 7A Slo Blo for 100-120V~

250V 4A Slo Blo for 220-240V~

PS-300 (model 20300):

Input voltage: 100-240V ~ 50/60 Hz 5-3A

250V 4A Slo Blo for 100-120V~

250V 2A Slo Blo for 220-240V~

PS-150 (model 20150):

Input voltage: 100-240V ~ 50/60 Hz 3-1.5A

250V 2A Slo Blo for 100-120V~

250V 1A Slo Blo for 220-240V~

Input Power: Automatically accepts 100-240V ~ 50/60 Hz

Input Signal: 1990 USITT standard DMX512

Red LED: Indicates power

Green LED: Indicates DMX signal

Size:

PS-600:

14"/356mm L x 7.8"/198mm W x 4.1"/104mm H

Weight: 7.9 lbs/3.6 kg

PS-300:

14"/356mm L x 7.8"/198mm W x 3"/76mm H

Weight: 5.4 lbs/2.4 kg

PS-150:

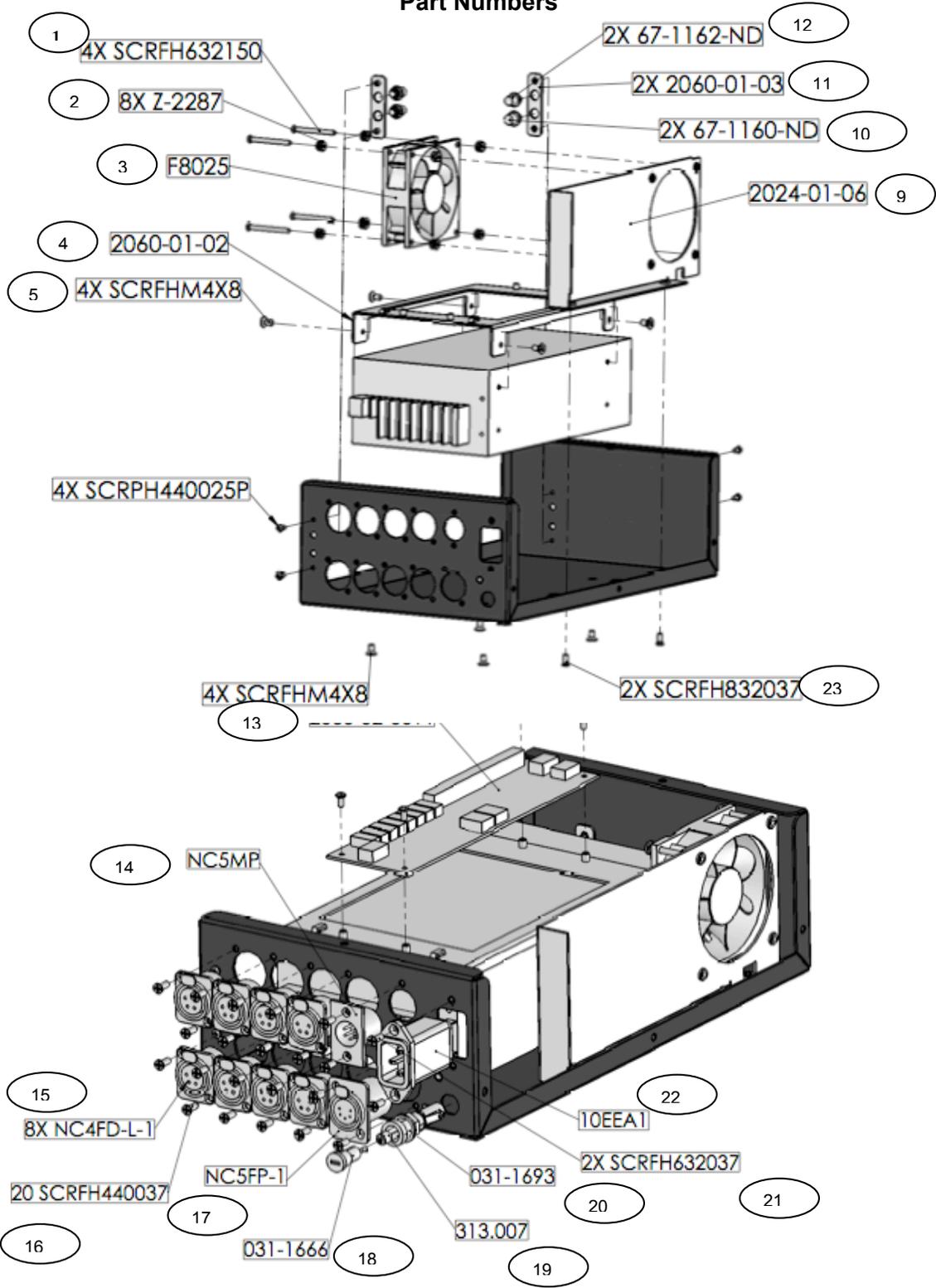
12.7"/323mm L x 7.6"/193mm W x 2.9"/74mm H

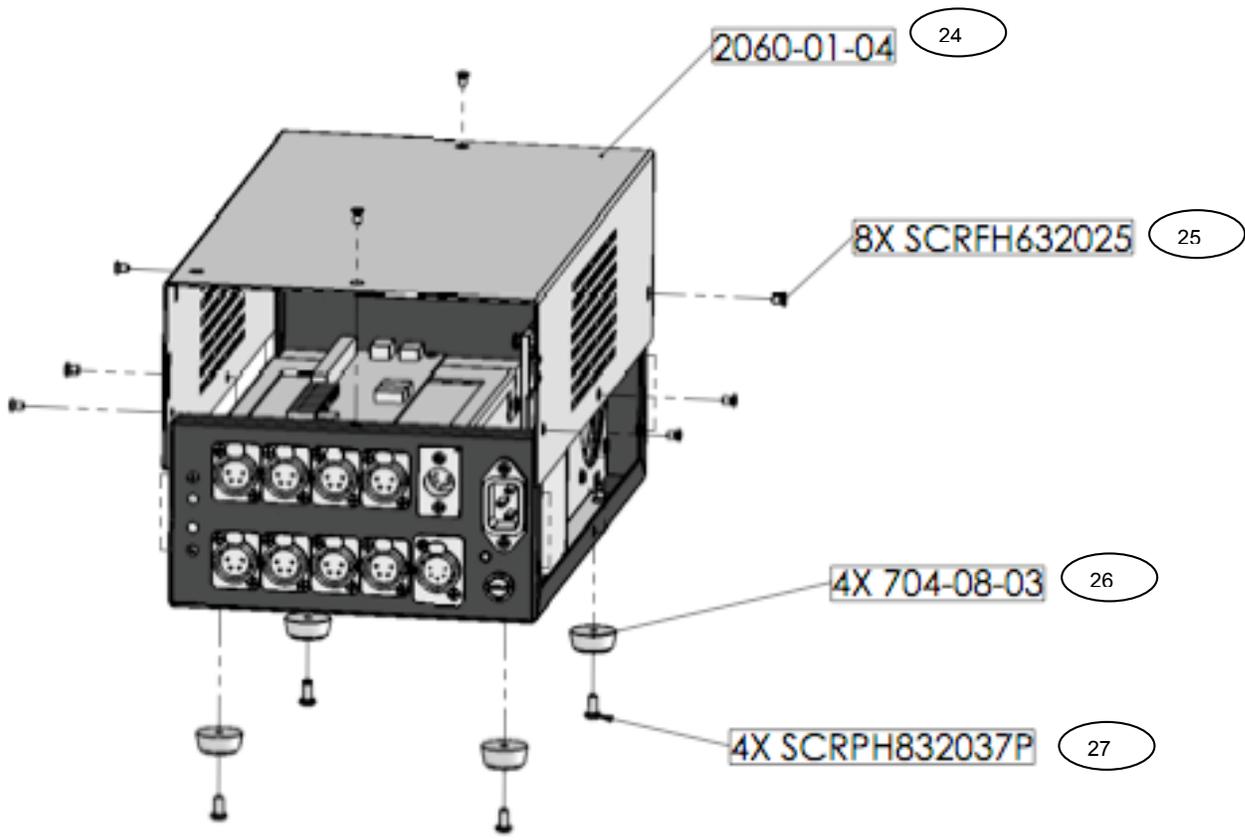
Weight: 3.9 lbs/1.8 kg

Parts List

<u>Callout</u>	<u>Quantity</u>	<u>Part Number</u>	<u>Description</u>
(1)	4	SCRFH632150	Flat head screw
(2)	8	Z-2287	Grommet
(3)	1	F0825	Fan 600W
	1	F6025S	Fan 300W/150W
(4)	1	2060-01-02	Board bracket 600W only
(5)	4	SCHRFHM4X8	Flat screw head 4mmX8mm
(6)	4	SCRPH440025P	Pan head black with patch
(7)	4	SCRFHM4X8	Flat screw head 4mmX8mm
(8)	2	SCRFH832037	3/8 Flat head black stainless
(9)	1	2024-01-06	24 way power supply fan plate
(10)	2	67-1160-ND	5mm green LED
(11)	2	2060-01-03	LED bracket
(12)	2	67-1162-ND	5mm red LED
(13)	1	2060-02-0011	Circuit card
(14)	1	NC5MP	5-pin chasis MT male
(15)	8	NC4FD-L1	4-pin chasis MT female (600W)
(16)	20	SCRFH440037	Flat head screw
(17)	1	NC5FP	5-pin chasis MT female
(18)	1	031-1666	Fuse cap round
(19)	1	313-007	Fuse 7 amp
(20)	1	031-1693	Fuse holder body
(21)	2	SCRFH632037	3/8 Flat head
(22)	1	10EEA1	Power connector filter
(23)	4	SCRPH440037	Pan head screw
(24)	1	2060-01-04	Top Chassis (600W)
(25)	8	SCSRFH632025	Flat head screw
(26)	4	704-08-03	Rubber feet
(27)	4	SCRPH832037P	Pan head machine black

Exploded View of a PS-600 Power Supply: Part Numbers





Model Numbers

Power Supply Units

20600	PS-600
20300	PS-300
20150	PS-150

Mounting Accessories

715-01-03P.....	PS-600, PS-300, and PS-150 hanger bracket
SCRWC252075	Wing screw for power supply hanger bracket to pipe
SCRSC2520037.....	Socket cap screw for hanger bracket to power supply

Power/Data Cable

7042-3	3' power/signal cable
7042-5	5' power/signal cable
7042-10	10' power/signal cable
7042-15	15' power/signal cable
7042-25	25' power/signal cable
7042-50	50' power/signal cable
7042-75	75' power/signal cable
7042-100	100' power/signal cable

Warranty Information

WYBRON, INC. warrants to the original owner or retail customer that for a period of one year from date of delivery of a portable system or energization of a permanently installed system (up to a maximum of 18 months from delivery) its products will be free from defects in materials and workmanship under normal use and service.

Warranty does not cover any product or part of a product subject to accident, negligence, alteration, abuse, misuse or any accessories or parts not supplied by WYBRON, INC. Warranty does not cover "consumable" parts such as fuses, lamps, or color media. WYBRON, INC.'s warranty does not extend to items not manufactured by us. Freight terms on warranty repairs are FOB WYBRON, INC. factory or designated repair facility. Collect shipments or freight allowances will not be accepted.

WYBRON, INC.'s sole responsibility under this warranty shall be to repair or replace at WYBRON, INC.'s option such parts as shall be determined to be defected on WYBRON, INC.'s inspection. WYBRON, INC. will not assume any responsibility for any labor expended or materials used to repair any equipment without WYBRON, INC.'s prior written authorization. WYBRON, INC. shall not be responsible for any incidental, general or consequential damages to property, damages for loss of use, time, profits or income, or any other charges.

The owner's obligations during the warranty period under this warranty are to notify WYBRON, INC. at WYBRON, INC.'s address within one week of any suspected defect, and return the goods prepaid to WYBRON, INC. at their factory or authorized service center.

This warranty is contingent on the customer's full and timely compliance with the terms of payment set forth in said purchase order. This warranty is expressly in lieu of any and all other warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose and of other obligations and liabilities on our part. The owner acknowledges that no other representations were made to him or relied upon him with respect to the quality and function of the goods sold.

This written warranty is intended as a complete and exclusive statement of the terms thereof. Prior dealings or trade usage shall not be relevant to modify, explain or vary this warranty. Acceptance of, or acquiescing in, a course of performance under this warranty shall not modify the meaning of this agreement even though either party has knowledge of the performance and a chance to object

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