



PS1-24

OWNERS MANUAL

24 VAC
90 WATT
WALL MOUNTED
CCTV POWER SUPPLY

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CONGRATULATIONS

You have purchased a practical source for CCTV power. The Juice Goose PS1-24 is a wall mountable 24 VAC power supply for attachment to a single high power consumption camera.

FEATURES SUMMARY

PS1 features include:

WALL MOUNT NEMA 1 ENCLOSURE EXTERNAL MOUNTING BRACKET POWER CONNECTION FOR 1 CAMERA 3.75 AMPS @ 24VAC MASTER POWER FUSE

SAFETY PRECAUTIONS

The PS1 is designed to operate with 120VAC, 60 Hz input. Operation with 220 or 240 volts will damage the unit and possibly cause personal injury.

CAUTIONS

1. The PS1 should always be grounded. Defeating the unit's grounding capability could create a hazard.
2. There are no user serviceable parts inside the PS1. Do not attempt service yourself. Contact Juice Goose as directed in this manual if service is required.
3. Do not expose the PS1 to moisture. Avoid severe physical impacts to the unit.

DISCLAIMER

Juice Goose shall under no circumstances be held responsible for any loss, damage or injury resulting from the use of the PS1 in a manner inconsistent with any of the procedures outlined in this document. The user is responsible for determining whether this product is appropriate for the intended application.

Juice Goose is not responsible for any indirect, secondary or ancillary loss or damage, including personal injury, loss of or damage to property or loss of income resulting from the operation or failure of this unit.

MAIN POWER FUSE

The PS1-24 is equipped with a current overload fuse on the 120 volt, power input, side of the transformer. A maximum 1 amp fuse should be used in this product.

INSTALLATION

1. Make sure the PS1 is NOT connected to power when installing it and making connection to a camera.
2. The PS1 is to be hardwired by a qualified electrician.

3. Remove desired “knock out” to route utility power input and camera power output leads into the enclosure. Mount the PS1 in the desired location using the four screw holes on the mounting bracket.

4. Power Leads

The blue wire leads on the transformer are to be connected to 120 volt, utility power. One blue lead is connected to the fuse holder. Connect the fuse holder lead and one blue lead to main utility hot and neutral leads. Connect the utility ground (green) lead to the ground lug on the chassis. Connect the red, 24 volt output, leads to the camera.

5. Replace front panel and secure with the 4 screws provided.

6. **Fuse Replacement** – Always turn off power to the PS1 before replacing the fuse. Use a maximum 1 amp fuse in the PS1-24.

TROUBLE SHOOTING

Before trouble shooting this power supply disconnect the power. If there is no power output check the fuse and power connections, both input and output.

REPAIR

Should your PS1 need service contact Juice Goose for assistance and authorization to return the unit. PLEASE NOTE: a return authorization number is required in order for the service personnel to correctly and promptly identify, repair and return your unit.

You may obtain a Return Authorization Number by calling: 713-772-1404 or sending email to info@juicegoose.com.

SPECIFICATIONS

DIMENSIONS (INCHES)	6.0 x 6.0 x 4.0
WEIGHT (LBS)	7
POWER INPUT	120 VAC, 60Hz
POWER OUTLETS	RED WIRE LEADS
CURRENT CAPACITY	.75 Amps @ 120 VAC 3.75 AMPS @ 24 VAC
CURRENT OVERLOAD PROTECTION	1 AMP MASTER CIRCUIT
CHASSIS DESIGN	NEMA 1 METAL ENCLOSURE
CHASSIS FINISH	POWDER COAT ENAMEL – TAN

POWER FACTS AND CALCULATIONS

TERMINOLOGY & RELATIONSHIPS

Amperage is a measure of current flow. (Similar to capacity or volume of flow.) A power supply with greater amperage capacity than the current demand of the equipment being powered is **OK**.

Amps = Watts / Volts (100 Watts at 24 Volts = 4.17 Amps)

Current (Amps) = Voltage / Resistance (Ohms)

Impedance in an AC circuit is very similar to resistance in a DC circuit and is often used interchangeably.

Resistance is a force that opposes current flow in a circuit.

Voltage is a measure of potential electromotive force (similar to pressure).

A power supply with higher voltage than recommended for a camera is **NOT OK**.

Voltage Drop/100 Feet = .2 x Amperage x 1.26 ^(AWG-10)

Watts = Volts x Amps (24 Volts with 4.17 Amps = 100 Watts)

VOLTAGE DROP

This chart illustrates voltage drop **per 100 feet of paired wire** as a function of wire gauge and load current. By matching load current (Amps) across the top of the chart with wire gauge (AWG) down the left side of the chart, one can determine voltage drop per 100 feet of paired wire run. Note: at 24 volts, 2 amps = 48 watts. For that size load the voltage drop for 100 feet of 18AWG would be 2.64 volts.

	0.5 Amps	1.0 Amps	2.0 Amps	4.0 Amps	10.0 Amps
AWG					
10	.10	.20	.40	.80	2.00
12	.16	.32	.64	1.25	3.2
14	.25	.50	1.0	2.0	5.0
16	.40	.80	1.60	3.20	8.00
18	.64	1.32	2.64	5.28	12.80
20	1.01	2.02	4.04	8.08	20.20
22	1.60	3.20	6.40	12.80	32.00

MINIMUM WIRE GAUGE FOR MAXIMUM 3.2 VOLT DROP

This table lists the required minimum wire size necessary to complete a paired wire run of the stated length and experience no more than a 3.2 volt drop between the power supply and the camera or other powered device. In the example above, should the cable run have been 200 feet rather than 100, with a 2 amp load, in order to not have a drop in excess of 3.2 volts, the wire size would need to be at least 16 AWG. An alternative solution would be to power the load with an original voltage of 28 VAC.

	0.5	1.0	2.0	4.0	10.0
Distance (Feet)					
25	22	22	22	20	18
50	22	22	20	18	14
100	22	20	18	16	12
200	22	18	16	12	-
300	20	16	14	10	-
400	18	16	12	10	-
500	16	14	12	-	-

**JUICE GOOSE
CCTV POWER SUPPLIES**

PART NUMBER	DESCRIPTION
RACK MOUNTED	
RPS16-RX-24-12	AC PROTECTION, 24VAC + 12 VDC, 16 CAMERAS
RPS16-RX-24-24	AC PROTECTION, 24VAC + 24VAC, 16 CAMERAS
RPS16-RX-24-0	AC PROTECTION, 24VAC, 8 CAMERAS
RPS16-RX-12-12	AC PROTECTION, 12VDC + 12 VDC, 16 CAMERAS
RPS12-RX-12-0	AC PROTECTION, 12 VDC, 8 CAMERAS
RPS16-0-24-12	24VAC + 12 VDC, 16 CAMERAS
RPS16-0-24-24	24VAC + 24VAC, 16 CAMERAS
RPS16-0-24-0	24VAC, 8 CAMERAS
RPS16-0-12-12	12VDC + 12 VDC, 16 CAMERAS
RPS16-0-12-0	12 VDC, 8 CAMERAS
WALL MOUNTED	
PS1-24	24VAC, 90W, 1 CAMERA.
PS1-24-4	24VAC, 90W, 1 CAMERA, NEMA 4 ENCLOSURE
PS4-24	24VAC, 90W, 4 CAMERAS, INCL. POWER CORD
PS4-24-4	24VAC, 90W, 4 CAMERAS, NEMA 4 ENCLOSURE
PS4-24-300	24 or 28VAC, 300W, 4 CAMERAS, INCL. POWER CORD
PS4-24-300-4	24 or 28 VAC, 300W, 4 CAMERAS, NEMA 4 ENCL.
PS8-24	24VAC, 90W, 8 CAMERAS, INCL. POWER CORD
PS8-24-4	24VAC, 90W, 8 CAMERAS, NEMA 4 ENCLOSURE
PS8-24-300	24 or 28VAC, 300W, 8 CAMERAS, INCL. POWER CORD
PS8-24-300-4	24 or 28VAC, 300W, 8 CAMERAS, NEMA 4 ENCL.

*For additional Juice Goose products log on to our web site
www.juicegoose.com*

or call

713.772.1404