DuraComm® POWER SUPPLIES
A Benny Lee Company

PRODUCT USER GUIDE

LP-14

Desktop Power Supply

Owners Guide

(These instructions are intended for use by a technician familiar with electronic products)

- Filtered and regulated
- Redundant temperature protection
- Overload protection
- Over voltage protection
- UL Recognized
- ISO 9001
- 3 year warranty

DESCRIPTION

The DuraComm LP Series of power supplies are UL recognized. They are manufactured in accordance with ISO 9001 quality assurance standards. These power supplies convert 120 or 240 volt 50/60 Hz AC power to low noise and ripple, regulated 13.8 volt DC output. (Note: units are factory pre-set for 120 AC input. Conversion for 240 volt AC input requires an internal adjustment by removing a "jumper wire" on the circuit board. This should only be done by a qualified technician or should be specified at the time of purchase.)

DuraComm's power supplies are protected against inadvertent shorts and overloads by an electronic output current limiting circuit. This current limiting circuit reduces the output limiting to a very low and safe value until the overload is removed from the power supply. As soon as the overload is removed, the output will be automatically restored.

Additionally the power supplies incorporate an over temperature feature to protect against undesired component failure should operation in excessive environmental temperatures occur. Units exceeding 15 amps surge output are equipped with cooling fans.

When these supplies (Model LP-18 and LP-25) are lightly loaded and cool, the fan will not run. When demand on the power supply increases and the internal temperature reaches 40°C, the fan will begin to run until the temperature drops below this threshold.

DuraComm LP series power supplies are compatible with all LPH radio hoods.

DuraComm LP series power supplies may be configured for battery back up & charging applications with the addition of the LPBC-25. See www.duracomm.com for more information.

SPECIFICATIONS

AC Input Voltage	100 ~ 130 VAC (pre-set), 200 ~260 VAC (take off internal jumpter J7)
Output Voltage	13.8 VDC (pre-set_ 12-15V Adj By. VR1)
Output Ripple	150 mV or less @ full load
Current at 20C	Surge 14 Amps
Continuous amps	11 Amps
Duty Cycle	Continuous = 100%
Overload	Fold back limited @ 120% maximum output
Over Voltage	16.5 VDC, auto re-set
Over Temperature	Typical internal sensor point 70C (156 F)
Load Regulation	0.5% No load to full load

Line Regulation	0.1% Max from 115-130 VAC
Efficiency	80% typical
Cooling	Convectional
Dimensions (all units)	192mm L x 178mm W x 45.5 mm H 7-5/8" L x 7" W x 1-13/16" H
Enclosure	Steal, vented
Power Cable	3 wire grounded with CEE input connector
Output Terminals	Binding Posts
Quality Assurance	ISO 9001 standards
Safety	UL Recognized

WARNING:

The individual user should take care to determine prior to use or installation whether this device is suitable, adequate, or safe for the use intended. Since individual applications are subject to great variation, DuraComm makes no representation or warranty as to the merchantability, suitability or fitness of these units for any specific application.

Precision regulated power supplies operate internally from voltages in excess of 300 volts. In rare cases, voltage spikes or transients on the AC power line, or over heating, may cause a component failure in the power supply. If this failure results in over voltage at the output terminals, the electronic over voltage feature will operate. Overload of the output will cause the over current feature to operate. In either case, the cause must be determined and corrected.

Failures require investigation as to the cause and/ or repair of the unit. THIS UNIT DOES NOT HAVE ANY USER SERVICEABLE PARTS. SERVICE AND REPAIR MUST BE REFERRED TO QUALIFIED PERSONNEL.

OPERATION:

Connect your 12 volt DC device to the red (positive) and black (negative) binding posts. Be certain you connect positive to positive (red) and negative to negative (black). Insert the AC plug into an AC outlet of the proper voltage.

Press the ON/OFF switch to the ON position and observe that the indicator light illuminates. If the indicator light fails to light, recheck the equipment installation, hook-up polarity, and the AC outlet.

PRECAUTIONS: DO NOT block any openings in the case or operate the unit in a hot, enclosed environment or compartment. Be sure adequate ventilation is provided since heat build-up will shorten component life. NOTE: Most audio and radio equipment draws much less average current than the peak demand.

If the unit stops working, check the 12 volt connections for tightness. If the unit fails again or repeatedly, have the unit checked by a qualified technician. HAZARDOUS VOLTAGES EXIST INSIDE THE UNIT. THERE ARE NO USER SERVICEABLE PARTS INSIDE. DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE.

Warning: The DuraComm series of desk top power supplies are accurately regulated to maintain output voltage from no load to full load. Slightly above the rated output load, the current limiting circuit begins to act, reducing the output voltage to prevent unit overload damage. Some loads, like incandescent lamps will have start-up current loads that are up to ten times the normal "hot" current drain. To ensure the DuraComm power supply will not encounter current limiting shut down; only operate incandescent loads that are about one-half to two-thirds of the maximum current rating.

NOTE: This device complies with part 15 of the FCC rules. Operation is subject to the following 2 conditions; 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

CONDUCTOR PRETREATMENT

All kinds of copper conductors can be clamped without treatment. **DO NOT** solder tin stranded conductors. The solder yields and fractures under high pressure. The result is increased contact resistance and excessive temperature rise. Additionally, corrosion has been observed due to the fluxes. Notch fractures at the transition from the rigid tinned part to the flexible conductors are also possible. Ferrules can be used as a protection when wiring stranded conductors. Copper ferrules prevent the current transfer from being influenced by dissimilar metals and remove the risk of corrosion. Always use the correct tool to crimp the ferrule.

RECOMMENDED COPPER WIRE SIZE FOR CURRENT CAPACITY

(Insulated Wire, Single Conductor in free air)

Current Level in Amperes	***Wire Size***
<7 AMPERES	*20 AWG Up to 5 feet* *18 AWG Up to 10 feet*
14 AMPERES	*18 AWG Up to 5 feet* *16 AWG Up to 10 feet*
20 AMPERES	*16 AWG Up to 5 feet* *14 AWG Up to 10 feet*
30 AMPERES	*14 AWG Up to 5 feet* *12 AWG Up to 10 feet*
40 AMPERES	*12 AWG Up to 5 feet* *10 AWG Up to 10 feet*
50 AMPERES	*10 AWG Up to 5 feet* *8 AWG Up to 10 feet*
70 AMPERES	*8 AWG Up to 5 feet* *6 AWG Up to 10 feet*
100 AMPERES	*6 AWG Up to 5 feet* *4 AWG Up to 10 feet*

LIMITED WARRANTY

DuraComm warrants to the initial end user, each power supply manufactured by DuraComm to be free from defects in material and workmanship, when in normal use and service for a period of three years from the date of purchase, from an authorized DuraComm dealer.

Should a product manufactured by DuraComm fail or malfunction due to manufacturing defect, or faulty component, DuraComm, at its option, will repair or replace the faulty product or parts thereof, which, after examination by DuraComm, prove to be defective or not operational according to specifications in effect at the time of sale to the initial end user. The product that is replaced or repaired under the provisions of this warranty, will be warranted for the remainder of the original warranty period, only, and will not extend into a new three year warranty period.

The limited warranty does not extend to any DuraComm product which has been subject to misuse, accidental damage, neglect, incorrect wiring not associated with manufacture, improper charging voltages, or any product which has had the serial number removed, altered, defaced, or changed in any way.

DuraComm reserves the right to change, alter, or improve the specifications of its products at any time, and by so doing, incurs no obligation to install or retrofit any such changes or improvements in or on products manufactured prior to inclusion of such changes.

DuraComm requires any product needing in or out of warranty service to be returned to DuraComm. All requests for warranty service must be accompanied by proof of purchase, such as bill of sale with purchase date identified. DuraComm is not responsible for any expenses or payments incurred for the removal of the product from its place of use, transportation or shipping expenses to the place of repair, or return expenses of a repaired or replacement product to its place of use.

The implied warranties which the law imposes on the sale of this product are expressly LIMITED, in duration, to the three (3) year time period specified herein. DuraComm will not be liable for damages, consequential or otherwise, resulting from the use and operation of this product, or from the breach of this LIMITED WARRANTY.

Some states do not allow limitations on the duration of the implied warranty or exclusions or limitations of incidental or consequential damages, so said limitations or exclusions may not apply to you. This warranty gives you specific legal rights which vary from state to state.

This warranty is given in lieu of all other warranties, whether expressed, implied, or by law. All other warranties, including WITHOUT LIMITATION, warranties of merchantability and fitness or suitability for a particular purpose, are specifically excluded. DuraComm reserves the right to change or modify its warranty and service programs without prior notice.

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