

The PS-50 is a rack- or wall-mountable bulk power supply for powering ISDN telephones and NT1 Network Terminations.

Fifty -48 VDC output connections are provided. Each output has self-resetting current limiting protection at 250 mA. The total available output current is 2.8 A, which is suitable to power up to 50 Tone Commander ISDN telephones.



Optional NT1-200 Battery Backup Power Supply and NT1-200 Add-on Battery units can be added to the PS-50 to enable uninterrupted ISDN power during a power failure.

Specifications

Power Requirements	120 VAC, 60 Hz, single phase, 2 A maximum
Output Voltage	-48 VDC nominal, -56 VDC maximum
Output Current	current limited at 250 mA per output pair, 2.8 A total (50 pairs)
Output Power, Total	150 watts
Output Connectors	(2) 50-position ribbon cable connectors (Amphenol type)
Short Circuit Protection	individual self-resetting current limiting for each output
Available Power for Terminals ..	10 watts maximum per output circuit 2.5 watts average per output circuit with 50 loads 150 watts total maximum
Physical Dimensions	3.5" H x 17.25" W x 4.6" D
Weight	4.3 lbs.
Operating Temperature	32° - 122° F (0° - 50° C)
Humidity	5% to 95%, non-condensing

Contents of Shipping Box

- | | |
|------------------------|---|
| (1) PS-50 Power Supply | (4) 10-24 x ¼" mounting bracket screws |
| (2) Mounting brackets | (1) Installation Instructions (this document) |



Important Safety Instructions

- This equipment is intended for installation in a restricted access location (dedicated equipment rooms, equipment closets, or the like) in accordance with Articles 110-16, 110-17, and 110-18 of the National Electrical Code, ANSI/NFPA No. 70.
- Never install telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations
- Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone wires.
- Do not mount the PS-50 within 12" of a heat source.
- Do not obstruct the heat vents on the top of the unit.

Tone Commander PS-50 ISDN Power Supply Installation Instructions

- Do not obstruct the fan on the rear panel of the unit.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

Mounting

The PS-50 can be mounted in an EIA standard 19" commercial or 23" telco rack, or wall mounted.

19" Rack Mounting

1. Attach the long sides of the mounting brackets to the PS-50 as shown in Figure 1, using the supplied mounting bracket screws.
2. Mount the PS-50 to the rack standards using suitable fasteners.



Figure 1 – 19" Rack Mounting

23" Rack Mounting

1. Attach the short side of the mounting brackets to the PS-50 as shown in Figure 2, using the supplied mounting bracket screws.
2. Mount the PS-50 to the rack standards using suitable fasteners.

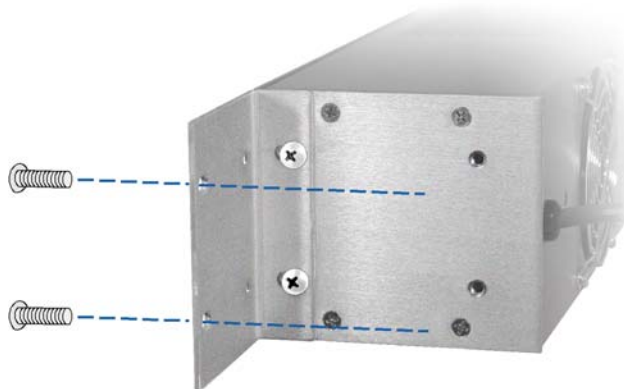


Figure 2 – 23" Rack Mounting

Wall Mounting

1. Attach the long side of the mounting brackets to the rear mounting holes on the PS-50 as shown in Figure 3, using the supplied mounting bracket screws.
2. Mount the PS-50 to the wall using suitable fasteners. **Do not obstruct the fan on the rear panel of the unit.**
3. To attach cables, remove the top mounting bracket screw from each side as shown, then tilt the PS-50 forward.

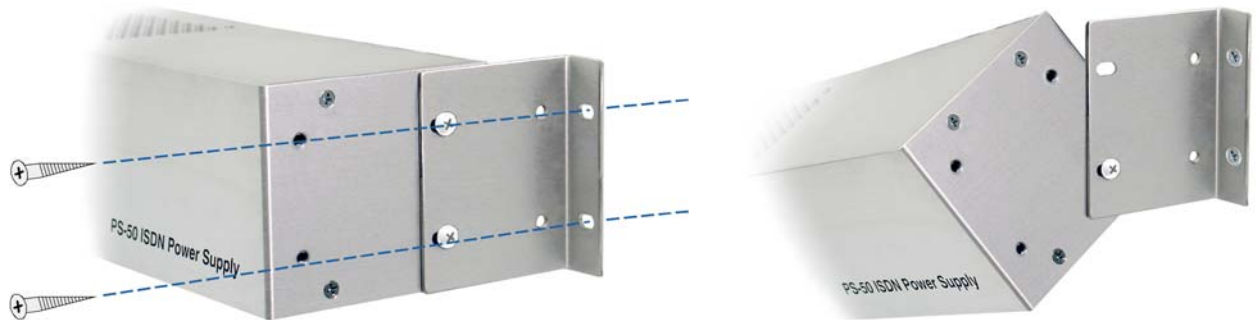


Figure 3 – Wall Mounting

Output Connections

Output connections are supplied on two 50-pin ribbon connectors.

1. Fill out the Number of Units column in Table 2 (on the back page) with the number of telephones, add-on devices, NT1s, and/or Battery Backup units that will be powered from the PS-50. Multiply the number of units by the wattage shown for each device, and enter the result in the Total Power column. Add all of the entries in the Total Power column to determine the output power required from the PS-50.

Total power for all devices must not exceed 150 watts.

2. Connect a male-ended ribbon cable from each 50-pin connector on the rear panel to a 50-pin punchdown block. See Table 1 for connector pinout.
3. Cross-connect power pairs from the power punchdown block to the blocks for the devices to be powered.

Observe correct polarity.



Figure 4 – PS-50 Rear Panel

Tone Commander PS-50 ISDN Power Supply Installation Instructions

Pin No.	Wire Color	Connector 1	Connector 2
26	WHT-BLU	GRD 1	GRD 26
1	BLU-WHT	-48 VDC 1	-48 VDC 26
27	WHT-ORN	GRD 2	GRD 27
2	ORN-WHT	-48 VDC 2	-48 VDC 27
28	WHT-GRN	GRD 3	GRD 28
3	GRN-WHT	-48 VDC 3	-48 VDC 28
29	WHT-BRN	GRD 4	GRD 29
4	BRN-WHT	-48 VDC 4	-48 VDC 29
30	WHT-SLT	GRD 5	GRD 30
5	SLT-WHT	-48 VDC 5	-48 VDC 30
31	RED-BLU	GRD 6	GRD 31
6	BLU-RED	-48 VDC 6	-48 VDC 31
32	RED-ORN	GRD 7	GRD 32
7	ORN-RED	-48 VDC 7	-48 VDC 32
33	RED-GRN	GRD 8	GRD 33
8	GRN-RED	-48 VDC 8	-48 VDC 33
34	RED-BRN	GRD 9	GRD 34
9	BRN-RED	-48 VDC 9	-48 VDC 34
35	RED-SLT	GRD 10	GRD 35
10	SLT-RED	-48 VDC 10	-48 VDC 35
36	BLK-BLU	GRD 11	GRD 36
11	BLU-BLK	-48 VDC 11	-48 VDC 36
37	BLK-ORN	GRD 12	GRD 37
12	ORN-BLK	-48 VDC 12	-48 VDC 37
38	BLK-GRN	GRD 13	GRD 38
13	GRN-BLK	-48 VDC 13	-48 VDC 38
39	BLK-BRN	GRD 14	GRD 39
14	BRN-BLK	-48 VDC 14	-48 VDC 39
40	BLK-SLT	GRD 15	GRD 40
15	SLT-BLK	-48 VDC 15	-48 VDC 40
41	YEL-BLU	GRD 16	GRD 41
16	BLU-YEL	-48 VDC 16	-48 VDC 41
42	YEL-ORN	GRD 17	GRD 42
17	ORN-YEL	-48 VDC 17	-48 VDC 42
43	YEL-GRN	GRD 18	GRD 43
18	GRN-YEL	-48 VDC 18	-48 VDC 43
44	YEL-BRN	GRD 19	GRD 44
19	BRN-YEL	-48 VDC 19	-48 VDC 44
45	YEL-SLT	GRD 20	GRD 45
20	SLT-YEL	-48 VDC 20	-48 VDC 45
46	VIO-BLU	GRD 21	GRD 46
21	BLU-VIO	-48 VDC 21	-48 VDC 46
47	VIO-ORN	GRD 22	GRD 47
22	ORN-VIO	-48 VDC 22	-48 VDC 47
48	VIO-GRN	GRD 23	GRD 48
23	GRN-VIO	-48 VDC 23	-48 VDC 48
49	VIO-BRN	GRD 24	GRD 49
24	BRN-VIO	-48 VDC 24	-48 VDC 49
50	VIO-SLT	GRD 25	GRD 50
25	SLT-VIO	-48 VDC 25	-48 VDC 50

Table 1 – 50-pin Output Connector Pinouts

Input Power

1. Verify that the power output cable (red and black wires) is plugged into the rack's POWER IN connector on the rear panel of the PS-50.
2. Plug the power cord into a local 120 VAC, 60 Hz, single-phase power outlet.

Battery Backup Power Supply

Refer to the NT1-200 Battery Backup Installation Instructions (doc. #13-102688) for Battery Backup power supply installation.

Service

Repair of the PS-50 ISDN Power Supply must be done by Tone Commander. Prior to equipment removal, call Tone Commander Customer Technical Support for assistance in determining the source of the problem. This critical action can often prevent needless removal of equipment and subsequent customer inconvenience.

Tone Commander
Customer Technical Support Department
11609 49th Place West
Mukilteo, WA 98275-4255 USA

Phone: (425) 349-1000
(800) 524-0024
Fax: (425) 349-1010
E-mail: tech@tonecommander.com
Web: www.tonecommander.com

Tone Commander is committed to meeting the product needs of our customers. Please write or call us with any suggestions for improvement.

Tone Commander Product Warranty

For a period of one year from date of end user purchase, but not to exceed 16 months from date of manufacture, Tone Commander Systems, Inc. (Tone Commander) warrants its products to be free from defects in material and workmanship under conditions of normal use and service. Tone Commander shall, at its option, repair or replace any defective product which, in its opinion, has not been misused, damaged, or improperly installed. Extension periods of this warranty for certain products may be available for purchase upon request.

Repair or replacement under this warranty will be performed at Tone Commander's factory. Authorization must be obtained from Tone Commander prior to returning a product for repair. Freight must be prepaid for all units returned to Tone Commander. Units repaired under warranty will be shipped UPS Ground (or equivalent), freight prepaid by Tone Commander.

Products that are older than the warranty period, but less than 7 years old, or still manufactured by Tone Commander may be repaired at the factory for a flat rate charge. Repaired out-of-warranty units are warranted for 90 days from the date of repair.

The repair or replacement of a product under this warranty represents the entire obligation of Tone Commander; Tone Commander shall not be liable for any special or consequential damages resulting from or caused by any defect, failure, incapacity or malfunction of any of its products.

The foregoing express warranty is in lieu of all other warranties, express or implied, including, but not limited to any implied warranty of merchantability, fitness, or adequacy for any purpose or use, quality, productiveness or capacity; Tone Commander, to the extent permitted by law, hereby disclaims all such other warranties.

Tone Commander PS-50 ISDN Power Supply Installation Instructions

Product	Power (watts)	Number of Units	Total Power
8810U	2.2	x	=
8810T	1.5	x	=
8610U / 8620U	2.2	x	=
8610T / 8620T	1.5	x	=
8030X	1	x	=
8001TA	0	x	=
8002TA	2	x	=
8003TA	2	x	=
6210U / 6220U	2.2	x	=
6210T / 6220T	1.5	x	=
6030X	1	x	=
6001TA	0	x	=
6002TA	2	x	=
NT1B-300TC	1	x	=
NT1U-220TC	1	x	=
NT1-200 Battery Backup	30	x	=
Total Power for All Devices:			

Must not exceed 150 Watts

Table 2 – Total Power Requirements