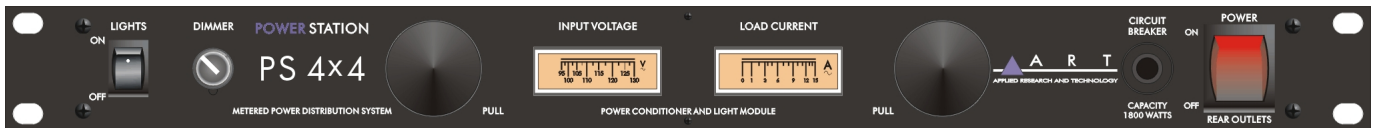
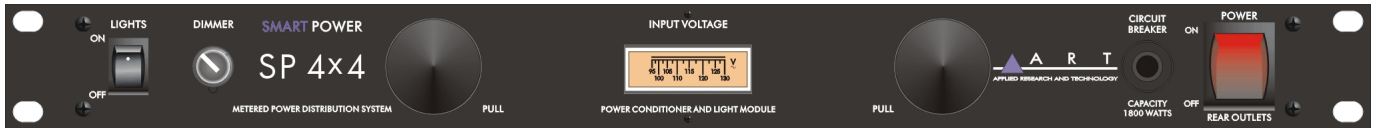


ART 4x4 SERIES

POWER CONDITIONERS WITH FILTERING



SERVICE MANUAL



IMPORTANT SAFETY INSTRUCTIONS - READ FIRST



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltages inside the enclosure that may be sufficient to constitute a risk of shock



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

Read instructions Retain these safety and operating instructions for future reference. Heed all warnings printed here and on the equipment. Follow the operating instructions printed in this user guide.

Do not open (except to convert the 1/4-inch jacks from inputs to outputs. See page 4.) There are no user serviceable parts inside. Refer any service work to qualified technical personnel only.

Power sources Only connect the unit to mains power of the type described in this user guide or marked on the rear panel. The power source must provide a good ground connection.

Power cord Use the power cord with sealed mains plug appropriate for your local main supply as provided with the equipment. If the provided plug does not fit into your outlet consult your service agent. Route the power cord so that it is not likely to be walked on, stretched or pinched by items placed upon or against.

Grounding Do not defeat the grounding and polarization means of the power cord plug. Do not remove or tamper with the ground connection on the power cord.

Moisture To reduce the risk of fire or electrical shock, do not expose the unit to rain, moisture or use in damp or wet conditions. Do not place containers of liquid on it, which may spill into any openings

Heat Do not locate the unit in a place close to excessive heat or direct sunlight, as this could be a fire hazard. Locate the unit away from any equipment which produces heat, such as power supplies, power amplifiers and heaters.

Environment Protect from excessive dirt, dust, heat, and vibration when operating and storing. Avoid tobacco ash, drink spillage and smoke, especially that associated with smoke machines.

Handling Protect the controls from damage during transit. Use adequate padding if you need to ship the unit. To avoid injury to yourself or damage to the equipment, take care when lifting, moving or carrying the unit.

Servicing Switch off the equipment and unplug the power cord immediately if it is exposed to moisture, spilled liquid or the power cord or plug becomes damaged during a lightning storm or if smoke odor or noise is noted. Refer servicing to qualified technical personnel only.

Installation Install the unit in accordance with the instructions printed in the user guide.

OVERVIEW

We congratulate you on choosing an ART 4x4 Power Distribution Unit. You will find that they have been designed for easy use. The latest advances in power technology have been utilized in the design of these units. Please read all instructions carefully before operating.

ART 4x4 Series Power Distribution Systems feature a unique "4x4" AC jack layout on the back of the unit where four of the eight rear outlets are 1.25-inches apart, allowing the user to plug in wide power supplies and devices.

Built into the 4x4 series is a surge and spike protection system designed to protect powered equipment from harmful electric surges and spikes that are commonplace in venues. The unit also has RFI and EMI filtering to all but eliminate cable induced noise in the AC power.

A front-located brightly illuminated on/off switch ensures power up and confirmation of the power source. The unit has a total power capacity of 1800 watts, and has a conveniently front-mounted, 15 amp circuit breaker for quick resets when necessary.

The rugged, all steel chassis occupies 1U rack spaces and is intended for installation into standard 19-inch equipment racks. Applications for the 4x4 Pro Series Power Distribution Systems include live sound systems/PA, permanent or fixed installations, church, club and practice PA systems, DJ sound systems, home and project recording systems and monitor systems.

Please read all instructions carefully before operating.

Features

All 4X4 Models (Power Base, Smart Power and Power Station) Feature:

- Front-Mounted Circuit Breaker Reset Switch
- Surge & Spike Protection
- EMI & RFI Filtering
- Unique "4X" Distribution on the Back- Four of the Eight Rear Switched Outputs are wider for Wall Wart Devices
- Total Power Capacity of 1800 watts
- Rugged All-Steel Chassis Occupies 1u Rack Space

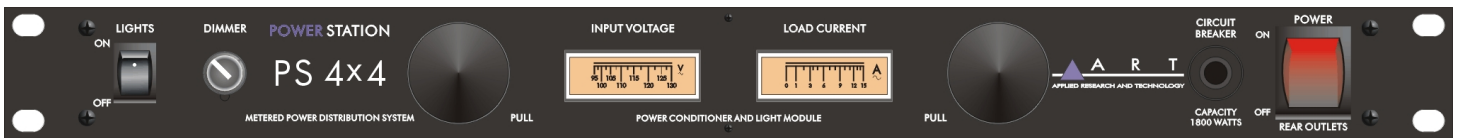
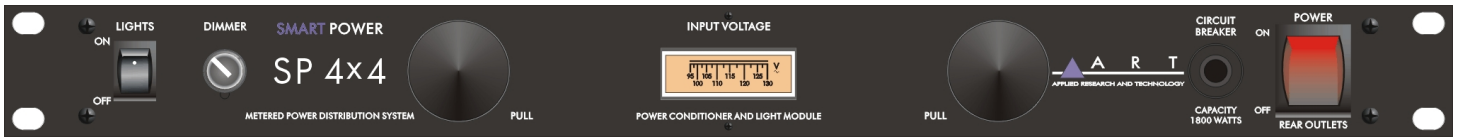
Smart Power (SP) adds:

- 2 Front Pull Out LED Light Pipes
- Backlit Linear Meter to Monitor Input Voltage
- Separate On/Off Light Switch
- Adjustable Dimmer Dial

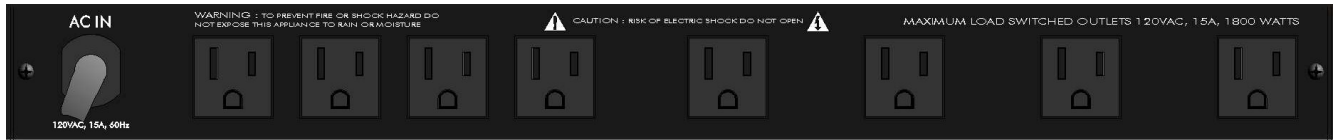
Power Station (PS) has all SP features, and adds:

- Backlit Ammeter to Monitor Load Current

ART 4x4 Series Family



Domestic units (shown) Export metering configured accordingly



Rear layout (Domestic) the rear panel is the same for all three 4x4's.



Rear layout (Export) the rear is the same for all three 4x4's.

OPERATION

MAXIMUM LOAD

The eight circuit breaker protected outlets are rated at 15 amps, which is equivalent to 1800 watts at 120 volts. If the total load on the **4x4 POWER DISTRIBUTION** Unit's outlets (and rack lights on the SP & PS) exceed 15 amps, the circuit breaker will trip, cutting off power to your rack. If this happens, reduce the load by unplugging one or more units from the 4X4 POWER DISTRIBUTION UNIT. Then push the circuit breaker button in to reset it.

LED LAMPS (SP & PS)

The **4x4 POWER DISTRIBUTION** Unit's lamps pull out easily and may be aimed to provide the best illumination for your equipment. Adjust the DIMMER control for the desired brightness. The lights do not turn off automatically when the tubes are pushed in, so be sure to switch the RACK LIGHTS switch to the OFF position before pushing in the tubes.

POWER SWITCHES

The **4x4 POWER DISTRIBUTION** Unit's has a master POWER switch for the rear outlets as well as the lights (SP & PS). This switch glows when the unit is on.

SERVICE PARTS

PB4X4

PART #	DESCRIPTION	PART USAGE	LOCATION
1552001101	SWT Rocker Power Red	Main power switch	S2
1552015101	AC Outlet	AC Power Connector	REAR PANEL
1552016101	Circuit Breaker Switch	Circuit Breaker	BR1

SP4X4

PART #	DESCRIPTION	PART USAGE	LOCATION
1005269103	SWT Rocker Power SPST	Dimmer power switch	Front panel
1552001101	SWT Rocker Power Red	Main power switch	Front panel
1552002101	VU Meter Voltage	Voltage meter	Front panel
1552004101	Dimmer Circuit Board	Circuit board for the dimmer	Front panel
1552005101	Voltage Meter CKT Board	Circuit board for the voltage meter	Inside center
1552007101	Pot 100KB Single	Dimmer pot	VR1
1552008101	1N4004	Meter Circuit	D01-DO4
1552009101	Diode 16V 1W	Meter Circuit	Z04,Z05
1552010101	Diode 33V 1/2W	Meter Circuit	Z01,Z02
1552011101	Diode 68V 1/2W	Meter Circuit	Z03
1552012101	Pot 50K OHMS	Meter Circuit	SFR01
1552013101	Resistor 1.2K OHMS 10W	Meter Circuit	RC01
1552014101	Resistor 33 OHMS 5W	Dimmer Circuit	R2

SP4X4 Continued

PART #	DESCRIPTION	PART USAGE	LOCATION
1552015101	AC POWER CONNECTOR	AC OUTLET	REAR PANEL
1552016101	CIRCUIT BREAKER	CIRCUIT BREAKER SWITCH	BR1
4X4TUBECOV	Light tube end cap	Light tubes	Front panel
1552020101	BULB SOCKET (old style)	For Pull out Light	
1552024101	LIGHT BULB 110v	Tube light bulb	IN THE PULL OUT TUBES
1552025101	LIGHT BULB 220v	Tube light bulb	IN THE PULL OUT TUBES
TUBELED	LED CKT BOARD	LEDS For Tube Light	IN TUBE
4652006101	NOM KNOB POT ROTARY	Dimmer knob	Front panel
1552023101	Phillips Round Head Screw	Holds The Front Panel To The Cover	Front panel

PS4X4

PART #	DESCRIPTION	PART USAGE	LOCATION
1005269105	SWT Rocker Momentary 3Pin	Power preview, tube lights	Front panel
1552001101	SWT Rocker Power Red	Main power switch	Front panel
1552004101	Dimmer Circuit Board	Circuit board for the dimmer	Front panel

PS4X4 Continued

PART #	DESCRIPTION	PART USAGE	LOCATION
1552007101	Pot 100KB Single	Dimmer pot	VR1
1004004101	1N4004	Meter Circuit	D01-DO4
1552014101	Resistor 33 Ohms 5W	Dimmer Circuit	R2
1552015101	AC Power Outlet	AC Outlet Plug	
1552016101	Circuit Breaker	Circuit Breaker Switch	BR1
INCANDESCENT UNIT			
1552020101	Bulb Socket (old style)	For Light tube bulb	
1552024101	Light Bulb 110v	Tube light bulb	In The Pull Out Tubes
1552025101	Light Bulb 220v	Tube light bulb	In The Pull Out Tubes
4022004101	SWT Micro Switch	Control Tube Light	Chassis Mount Rear
4022008101	AC Bulb Goose Neck Light	Rear Light	Chassis Rear
LED UNITS			
4022008102	LED Goose Neck Light	Rear Light	Chassis Rear
4X4TUBECOV	Light tube end cap	Light tubes	Front Panel
TUBELED	LED Ckt Board	LEDS For Tube Light	IN TUBE

PS4X4 Continued

PART #	DESCRIPTION	PART USAGE	LOCATION
MISC.			
4022001101	Step Down Transformer ART401-1	Dimmer Board	Chassis Mounted
4032001101	Voltage/Current Meter CKT Board	Circuit board for the voltage meter	Inside Center
4022003101	IC LED Segment Display	On Display Ckt Board	
4032002101	Transformer For Display Board	Display	PT1
4022007102	Screw Connector Jack	Rear Goose Neck Light	Chassis Rear
4032003101	TRIPLE RED LENSE	DISPLAY COVER	FrontPanel
4652006101	NOM KNOB POT ROTARY	DIMMER KNOB	Front Panel
1552023101	PHILLIPS ROUND HEAD SCREW	HOLDS THE FRONT PANEL TO THE COVER	Front Panel

SCHEMATICS

PB4X4

SP4X4

PS4X4

WARRANTY INFORMATION

Limited Warranty (USA only)

Applied Research and Technology will provide warranty and service for this unit in accordance with the following warrants:

Applied Research and Technology, (ART) warrants to the original purchaser that this product and the components thereof will be free from defects in workmanship and materials for a period of **three** years from the date of purchase. Applied Research and Technology will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to the factory service department or authorized service center, accompanied by proof of purchase date in the form of a valid sales receipt.

Exclusions

This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. This warranty is void if the serial number is altered, defaced, or removed.

ART reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install the same on products previously manufactured.

ART shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights and you may have other rights, which vary, from state to state. The warranty terms listed above are only valid within the United States of America.

For units purchased outside the United States, an authorized distributor of Applied Research and Technology will provide service. For information on warranty and service policies outside of the U.S., please contact your local distributor.

SERVICE

The following information is provided in the unlikely event that your unit requires service.

1. Be sure that the unit is the cause of the problem. Check to make sure the unit has power, all cables are connected correctly, and the cables themselves are in working condition. You may want to consult with your dealer for assistance in troubleshooting or testing your particular configuration.
2. If you believe that the ART unit is at fault, go to **www.artproaudio.com**.
3. Select “*Support*”, then “*Return Authorization Request*” to request a return authorization number.
4. If you are returning the unit for service, pack the unit in its original carton or a reasonable substitute. The original packaging may not be suitable as a shipping carton, so consider putting the packaged unit in another box for shipping. Print the RA number clearly on the outside of the shipping box. Print your return shipping address on the outside of the box.
5. Include, with your unit, a note with the RA number and your contact information, including a return shipping address (we cannot ship to a P.O. box) and a daytime phone number, and a description of the problem, preferably attached to the top of the unit. Also include a copy of your purchase receipt.

Please fill in the following information for your reference:

Date of purchase: _____

Purchased from: _____

Serial Number: _____

SPECIFICATIONS

Power Capacity	1800 Watts
Circuit Breaker	15 Amp Domestic, 8 Amp Export, Front Location
Power Outlets	Rear Outlets (x 8)
Power Switch	Front location - On/Off
Power Switch Illumination	Yes - In "On" Position
Filtering	EMI & RFI
Protection Circuit	Surge & Spike Protection
Light Pipes	PB4x4 - None SP4x4 - 2 Front Pull-Out Shock Mounted w/dimmer PS4x4 - 2 Front Pull-Out Shock Mounted w/dimmer
Metering	PB4x4 - None SP4x4 - Input Voltage, Linear PS4x4 - Input Voltage Linear, Load Current, Linear
Construction	All - Steel Chassis
Dimensions (HWD)	1.75-inch x 19-inch x 6.5-inch 44mm x 482mm x 165mm
Weight	5.5 lbs. (2.5 kg) PB4x4 6.3 lbs. (2.8 kg) SP4x4 6.6 lbs. (3.0 kg) PS4x4

ART maintains a policy of constant product improvement. Therefore, specifications are subject to change without notice.



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