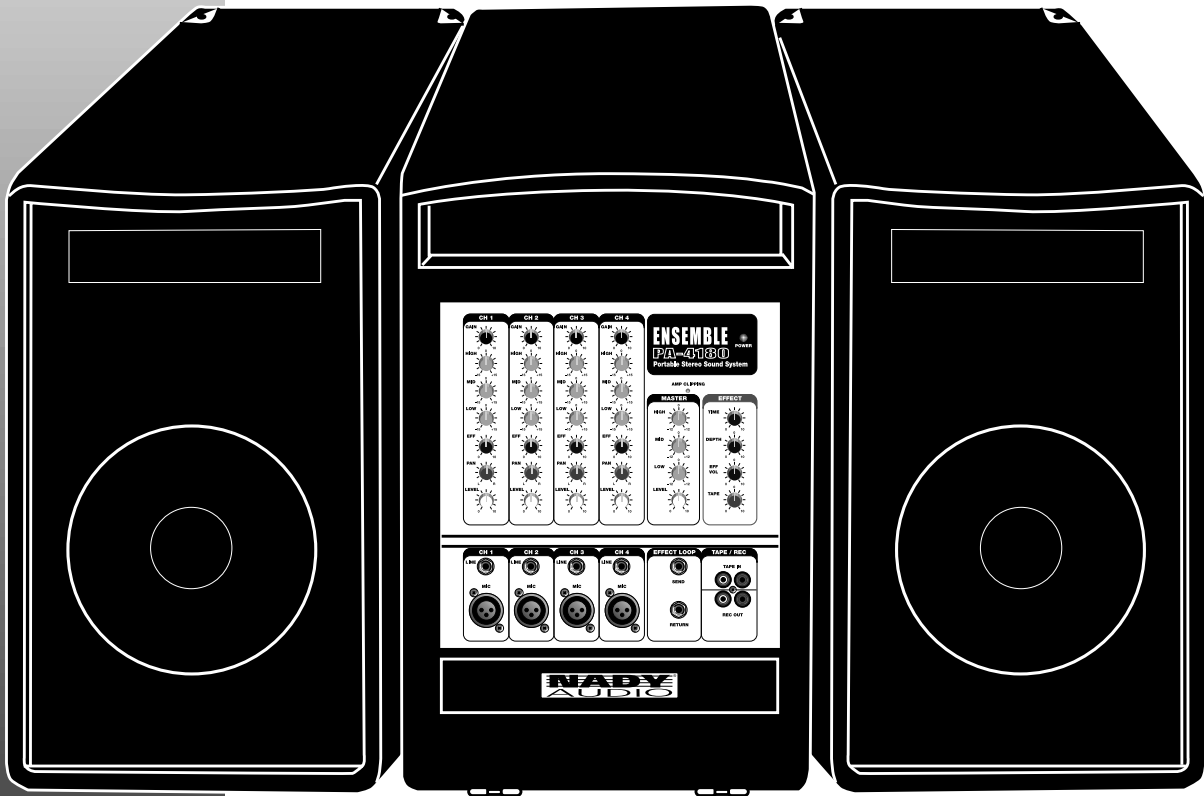




# OWNER'S MANUAL



## **ENSEMBLE PA 4180** Portable Stereo Sound System

# ENSEMBLE PA 4180

## Portable Stereo Sound System



Congratulations on your choice of a portable sound system — you have purchased one of the finest portable sound systems on the market today. This unit was developed using the expertise of professional sound engineers and working musicians. You will find that your new NADY AUDIO portable sound system has superior performance and greater flexibility than any other portable sound systems in its price range. Please read this manual carefully to get the most out of your new unit.



Thanks for selecting NADY AUDIO as your choice in portable sound systems.

### FEATURES

- Convenient portable PA package with carrying/pulling handle and wheels for easy transport
- 4-Channel 180 W RMS stereo powered mixer, 90W RMS per side @ 4 ohms
- Two-way speaker system with 8" woofer and piezoelectric tweeter horn with base mounts for ease of mounting on speaker stands. 20' speaker cables included.
- 4 each XLR mic and 1/4" line inputs, each with Input Gain, High, Mid, Low, Effects, Pan and Channel Level Controls.
- Master Section with High, Mid, and Master Level Controls, External Effect Loop Send and Return jacks, Stereo Tape In/Rec Out controls with a Tape In level control, and built-in Reverb/Delay with Time, Depth and Effect Volume controls.
- 115V(60Hz)/230V(50Hz) voltage select switch for worldwide operation
- Storage compartment for microphones, cables and accessories

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Date of Purchase \_\_\_\_\_

Dealer's Name \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Model # \_\_\_\_\_

Serial # \_\_\_\_\_

# WARNING



An equilateral triangle enclosing a lightning flash/arrowhead symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure which may be of sufficient magnitude to constitute a risk of electric shock.



An equilateral triangle enclosing an exclamation point is intended to alert the user to the presence of important operating and service instructions in the literature enclosed with this unit.

## IMPORTANT SAFETY INSTRUCTIONS

When using this electronic device, basic precautions should always be taken, including the following:

1. Read all instructions before using the product.
2. Do not use this product near water (e.g., near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, etc.).
3. This product should be used only with a cart or stand that will keep it level and stable and prevent wobbling.
4. This product, in combination with headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be positioned so that proper ventilation is maintained.
6. The product should be located away from heat sources such as radiators, heat vents, or other devices (including amplifiers) that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product. Replace the fuse only with one of the specified type, size, and correct rating.
8. The power supply cord should: (1) be undamaged, (2) never share an outlet or extension cord with other devices so that the outlet’s or extension cord’s power rating is exceeded, and (3) never be left plugged into the outlet when not being used for a long period of time.
9. Care should be taken so that objects do not fall into, and liquids are not spilled through, the enclosure’s openings.
10. The product should be serviced by qualified service personnel if:
  - A. The power supply cord or the plug has been damaged.
  - B. Objects have fallen into, or liquid has been spilled onto the product.
  - C. The product has been exposed to rain.
  - D. The product does not appear to operate normally or exhibits a marked change in performance.
  - E. The product has been dropped, or the enclosure damaged.
11. Do not attempt to service the product beyond what is described in the user maintenance instructions. All other servicing should be referred to qualified service personnel.

# INSTALLATION

To ensure years of enjoyment from your NADY AUDIO Ensemble PA-4180, please read and understand this manual thoroughly before using the unit.

## 1. INSPECTION

Your NADY AUDIO Ensemble PA-4180 was carefully packed at the factory in packaging designed to protect the units in shipment. Before installing and using your unit, carefully examine the packaging and all contents for any signs of physical damage that may have occurred in transit.

*[Please note: Nady Systems is not responsible for shipping damage. If your unit is damaged, do not return to Nady, but notify your dealer and the shipping company (if shipped to you) immediately to make a claim. Such claims must be made by the consignee in a timely manner.]*

### CONTENTS:

- PA-4180 Mixer Section
- PA-4180 Left Speaker
- PA-4180 Right Speaker
- (2x) 20' Speaker Cables
- AC cord
- Instruction Manual
- Warranty Card

## 2. SETUP

After transporting the PA-4180 to the desired location, stand the unit up on its feet and wheels. Unclasp and unhook the side panel latches and carefully remove the top speaker by lifting on the latch panel of the speaker and pulling apart the hinge connection. Lift off the mixer section in the same manner.

Position the PA-4180 mixer section on a flat surface with the control panel facing front. Parts of the unit can become very warm during use. This is normal during operation. Care should be taken to ensure that there is enough space around the Mixer Section for cooling. Make sure the side panel vents are not obscured and have plenty of ventilation. Also, do not place the PA-4180 on high temperature devices such as power amplifiers, etc., or the unit may overheat in operation. Although the PA-4180 is shielded against radio frequency (RF) and electromagnetic interference (EMI), extremely high fields of RF and EMI should be avoided.

Please make sure that the power unit supplied is marked for the correct voltage in your area (120VAC/60 Hz or 230VAC/50 Hz). Power requirements for electrical equipment differ from area to area. In new installations and

portable sound systems, or any situation in which the AC power is in question, it is wise to confirm the voltage and use the appropriate power supply unit before connecting it to power sources.

Europe (except UK): 230V, 50Hz

UK and Australia: 240V, 50Hz

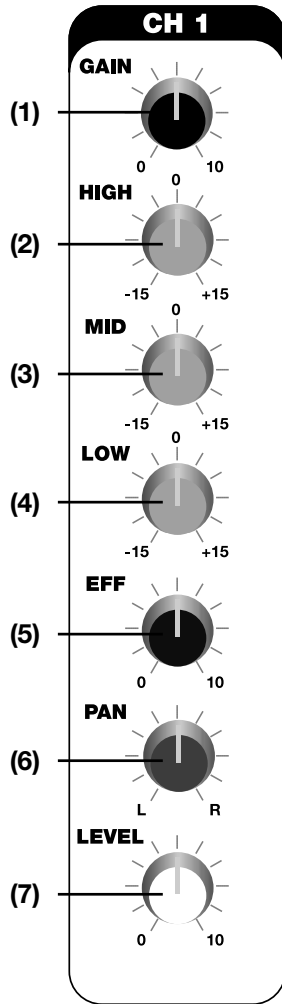
USA and Canada: 120V, 60 Hz

For other areas, please check with local authorities.

Connect the speaker cables to the input jacks on the rear panel of both the Left and Right speakers. The connecting terminal offers Speakon™ and two 1/4" jacks for easy daisy chaining. Connect the other end of each cable to the corresponding Left and Right speaker outputs on the rear panel of the PA-4180 mixer section. Position the length of the cables so they will not be a safety hazard to people.

Connect all sound sources to the appropriate inputs i.e., microphones, keyboards, CD players, karaoke machines. When ready to operate, plug the AC cord into the power source. Make sure that the unit is turned off before connecting to the AC power source to avoid possible loud transients which can damage your speakers or your ears. Before turning on, connect up the speakers and all inputs and outputs desired and turn down the Master Volume.

# FRONT PANEL CONTROLS & CONNECTIONS



## FRONT PANEL

*Note: 1 through 9 below are referenced to Channel 1. The other 3 Channels are identical.*

### (1) GAIN CONTROL

The channel gain controls determine the signal level input to each channel.

### (2) HIGH EQ

Turn this control to the right to boost high frequencies on the channel, adding crispness to percussion from drum machines, cymbals and synths. Turn to the left to cut these frequencies, reducing sibilance, hiss, or high frequency feedback. The control has a shelving response giving 15dB of boost or cut at 12kHz.

### (3) MID EQ

Turn this control to the right to define the midrange or bring out the vocals on the channel. Turn to the left to cut these frequencies and reduce midrange muddiness. The control has a shelving response giving 15dB of boost or cut at 2.5kHz.

### (4) LOW EQ

Add warmth to vocals or extra punch to guitars, drums and synths on the channel by turning this control to the right. Turn to the left to reduce stage rumble, hum or to improve a mushy sound. The control has a shelving response giving 15dB of boost or cut at 90Hz.

### (6) PAN CONTROL

The channel Pan positions the output of the channel in the stereo field of the main mix. Its constant-power design ensures there are no level discrepancies whether a signal is hard-panned, center-stage, or somewhere in-between.

### (7) LEVEL CONTROL

The Level Control determines the amount of the channel signal sent to the main mix and Tape Output.

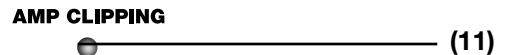
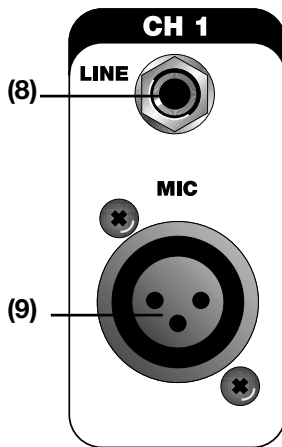
### (8) LINE INPUT

The Line input is designed to accept balanced or unbalanced line-level signals such as those from keyboards, drum machines, or samplers. Use the GAIN control (1) to adjust for the desired level. If a balanced signal is to be connected to the line input, then a 1/4" TRS (stereo) phone plug should be wired for: Tip = positive (+), Ring = negative (-), Sleeve = ground.

### (9) MIC INPUT

The Mic input is an electronically balanced XLR type designed to accept signals from any balanced low impedance (Low Z) microphone. It will be necessary to adjust the channel gain with the input GAIN control (1) to achieve a nominal operating level. The XLR jack is configured for: Pin1 = ground, Pin2 = positive (+), Pin3 = negative (-).

*(Note: Only either the Mic or the Line input of a given channel can be connected at one time. Do not connect both simultaneously to the same channel.)*



### (10) POWER "ON" LED

The POWER LED will light red when you turn on the power switch ON.

### (11) AMPLIFIER CLIPPING LED

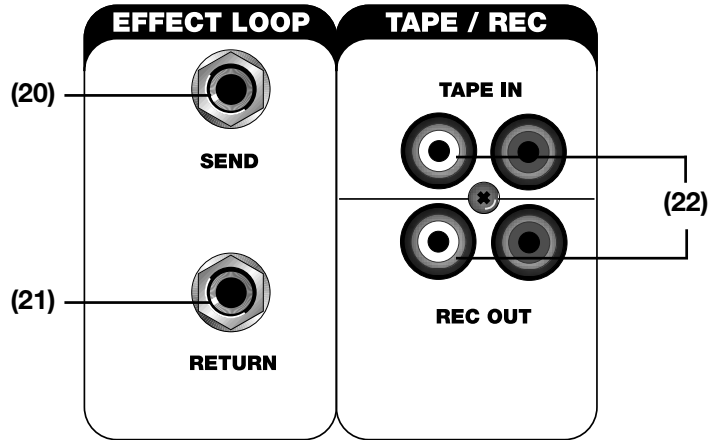
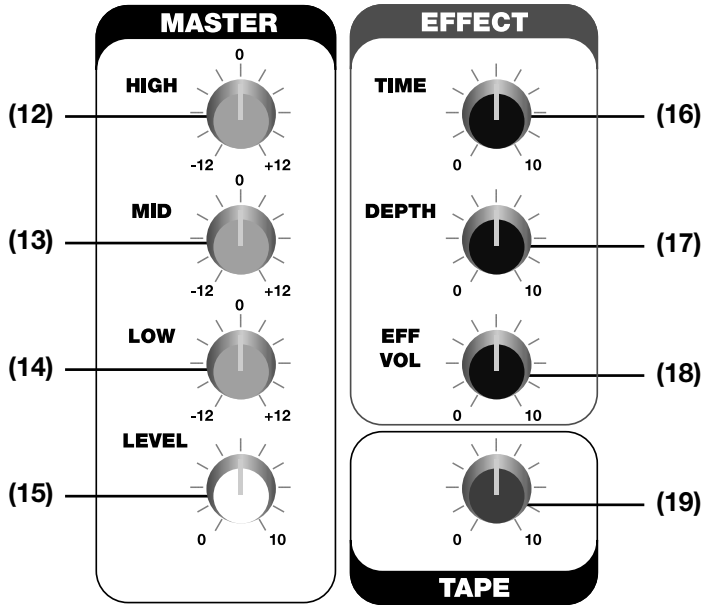
This LED turns red when the output signal is clipping. It is acceptable if the red LED lights very occasionally. If the red LED lights more than occasionally, you should turn down the volume to avoid audible distortion and damage to the speakers.

*Note: Speakers damaged due to hard clipping are not covered under warranty.*

### (5) EFFECTS CONTROL

The EFF control adjusts the signal level sent by each channel to the internal DSP (Digital Sound Processor) and also to the **EFFECT LOOP SEND output (20)**.

# FRONT PANEL CONTROLS & CONNECTIONS



## (12) MASTER - HIGH CONTROL

The control has a shelving response giving 15dB of boost or cut at 12KHz.

## (13) MASTER - MID CONTROL

The control has a shelving response giving 15dB of boost or cut at 2.5KHz.

## (14) MASTER - LOW CONTROL

The control has a shelving response giving 15dB of boost or cut at 90Hz.

## (15) MASTER - LEVEL CONTROL

This adjusts the final level of the Master bus which is output to the speakers.

## (16) EFFECT - TIME CONTROL

This adjusts the delay time between the original audio signal, the first reverb reflection sound and each subsequent reflection. The max time delay is 0.2s

## (17) EFFECT - DEPTH CONTROL

This controls the amount of feedback of the reverb reflection, i.e. the number of reflections and the length of time before they diminish in volume.

## (18) EFFECT - VOL CONTROL

This adjusts the level of the reverb effect sent to the main mix.

## (19) TAPE CONTROL

This control adjusts the level of the Tape Input signal sent to the Master outputs.

## (20) EFFECT LOOP SEND

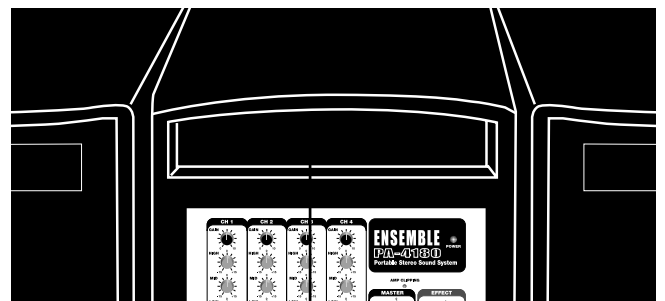
This line level output can be connected to external recorders, amplifiers, or effects processors. The signal is a mix of the channel inputs determined by each Channel EFF SEND control.

## (21) EFFECT LOOP RETURN

This input can be used to return the effected signal into the PA-4180 or it can be used as a auxiliary input. The input signal can be adjusted by the Master Volume and the unit the return jack is connected to.

## (22) TAPE IN AND TAPE OUT

The Left and Right TAPE IN allows cassette recorders or CD players to be added to the Main output. The RECORD OUTPUT, with TAPE RCA jacks, provides signal output to a cassette deck or home audio equipment.

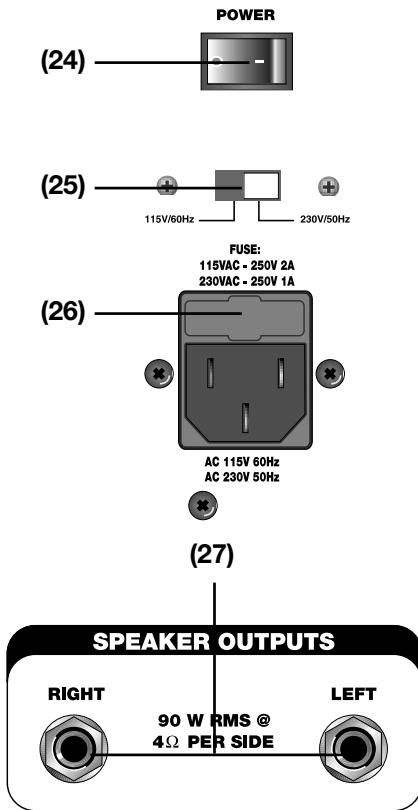


(23)

## (23) STORAGE COMPARTMENT

The panel can be removed using by pulling on the black canvas strap to reveal this compartment for storing microphones, speaker cables, or installing wireless microphone receivers.

# REAR PANEL CONTROLS & CONNECTIONS



## REAR PANEL

### (24) POWER SWITCH

Turns the unit ON or OFF. Always turn level controls down before turning on the unit.

### (25) VOLTAGE SELECTOR SWITCH

For selecting the proper voltage (115/230VAC) to match the power supply in your area.

*Note: To avoid damage to your unit, always make sure this switch is set to the correct supply voltage. Damage caused by improper use is not covered by the warranty.*

### (26) POWER CONNECTOR WITH FUSE HOLDER

This standard IEC power cord receptacle is used to connect the AC power to your unit. It features a built-in fuse holder for a 5X20mm, (4A/250V for 115VAC, and 2A/250V for 230VAC operation) fast-blow fuse. If the fuse continuously blows, shut off the unit and have it serviced by qualified service personnel.

### (27) SPEAKER OUTPUTS

Two 1/4" (6.3mm) jacks, each powered by its own separate amplifier output stage, for connecting left and right speaker cabinets. The connected speaker impedance must be 4 ohms or greater. The PA-4180 delivers 90W RMS of power @ 4 Ohms per each speaker output.

**CAUTION: Do not overload the ENSEMBLE PA 4180 with speaker loads less than 4 ohms as this will degrade performance and may harm the unit. Damage caused by improper use is not covered by the warranty.**

# SPECIFICATIONS

## SPEAKERS

Impedance .....	8 Ohms
Tweeter type .....	Piezoelectric
Woofer diameter .....	8"

## PA-4180 MIXER SECTION

Power .....	90W RMS @ 4 Ohms Per Side
S/N Ratio .....	>115dB
THD Power output, 20Hz to 20KHz .....	<0.1%
CROSSTALK (1KHz @ 0dBu, channel in to master output)	
Channel fader down .....	<-60dB

## FREQUENCY RESPONSE *(Mic input to output)*

Line level o/p @ +4dBu into 600 Ohms .....	+0/-3dB
Power amp o/p 1 watt into 8 Ohms per side .....	+0/-3dB

## SENSITIVITY @ LINE OUTPUT +4dBu with Master and Channels controls set to MID

Mic/Line .....	-54/-24dB
Tape in .....	-6dB
Max Input Level XLR .....	-9dB
Max Input Level 1/4" .....	+22dB

## CHANNEL EQUALIZATION

Low EQ .....	90Hz ±15dB
Mid EQ .....	2.5KHz ±15dB
Hi EQ .....	12KHz ±15dB

## MASTER EQUALIZATION

Low EQ .....	90Hz ±15dB
Mid EQ .....	2.5KHz ±15dB
Hi EQ .....	12KHz ±15dB

## Microphone Preamp E.I.N.

(150ohm Terminated, max. Gain) .....	-102 dBm
Power requirements .....	100-120, 220-240 VAC, 50-60 Hz
Fusing .....	5x20mm glass type, 4A/250V for 115VAC, and 2A/250V for 230VAC operation, fast-blow fuse
Dimensions (W x H x D) .....	15.5" x 27.5" x 10.5" (40 cm x 70 cm x 27 cm)
Weight .....	62.7 lbs. (28.4 Kgs)

*Note: Specifications subject to change without notice for product improvement purposes.*

## **SERVICE FOR YOUR NADY AUDIO PRODUCT**

**(U.S.)** Should your NADY AUDIO product require service, please contact the Nady Service Department via telephone at (510) 652-2411, or e-mail at [service@nady.com](mailto:service@nady.com).

**(International)** For service, please contact the NADY AUDIO distributor in your country through the dealer from whom you purchased this product.

DO NOT ATTEMPT TO SERVICE THIS UNIT  
YOURSELF AS IT CAN BE DANGEROUS AND  
WILL ALSO VOID THE WARRANTY.

