

## GLOSSARY

The following terms are used in this manual. Since they may be unfamiliar, definitions are provided as follows.

**Bridging:** Combining two amplifier channels into one channel. Typically used to create a mono output.

**Gain:** The ratio of output voltage to input voltage. The gain control allows adjustment to the amplifier's output level for varying input levels.

**L E D:** Light emitting diode. Usually indicates power on/off or signal overload.

**Remote turn on:** Low current automatic switching circuit that turns the amplifier on and off. Typically connected to the remote antenna output or Amp turn-on lead of most car radios, cassette players or CD players.



## SPECIFICATIONS

| APA 430-iX                            |   | APA 630-iX                   |  |
|---------------------------------------|---|------------------------------|--|
| Amplifiers with Integrated Crossovers |   |                              |  |
| 30W                                   | Continuous Power Output (Watts per channel) | 30W                          | 30W                                    |
| 100 W                                 | 4 ohms 14.4 Volts, stereo                   | 100 W                        | 4 ohms 14.4 Volts, bridged             |
| 50 W                                  | 2 ohms 14.4 Volts, stereo (per ch.)         | 50 W                         | 2 ohms 14.4 Volts, stereo (per ch.)    |
| 25 A                                  | Fuse  | 35                           | Fuse                                   |
| 10 Hz - 50 kHz                        | Power Bandwidth                             | 10 Hz - 50 kHz               | Power Bandwidth                        |
| 0.08%                                 | Total Harmonic Distortion                   | 0.08%                        | Total Harmonic Distortion              |
| >90 dB                                | Signal to Noise Ratio                       | >90 dB                       | Signal to Noise Ratio                  |
| >300                                  | Damping Factor                              | >300                         | Damping Factor                         |
| >72 dB                                | Stereo Separation                           | >72 dB                       | Stereo Separation                      |
| 0.01 - 20V                            | Input Sensitivity                           | 0.01 - 20V                   | Input Sensitivity                      |
| 10 K Ohms                             | Input Impedance                             | 10 K Ohms                    | Input Impedance                        |
| 2-8 Ohms                              | Output Impedance (Stereo)                   | 2-8 Ohms                     | Output Impedance (Stereo)              |
| 4-8 Ohms                              | Output Impedance (Bridged)                  | 4-8 Ohms                     | Output Impedance (Bridged)             |
| 14.4 Volts                            | Supply Voltage                              | 14.4 Volts                   | Supply Voltage                         |
| 90 Hz                                 | Crossover Frequency (12 dB per octave)      | 90 Hz                        | Crossover Frequency (12 dB per octave) |
| 4 Channel                             | Crossover Operation                         | 6 Channel                    | Crossover Operation                    |
| 2 Front, 2 Rear                       | 2 Front, 2 Rear, 2 Nonloaded                | 2 Front, 2 Rear, 2 Nonloaded | 2 Front, 2 Rear, 2 Nonloaded           |
| 8.7" x 7" x 10.1"                     | Dimensions                                  | 8.7" x 7" x 14.6"            | Dimensions                             |

## INTRODUCTION INSTALLATION

L O C A T I O N

The Sedona APA 430-iX and APA 630-iX are part of a comprehensive line of amplifiers designed to provide flawless sonic performance. The internal crossover and the multi-channel design provide a variety of system configurations. This enables the amplifiers to meet most any need in the automotive environment. In the following pages, the step-by-step instructions should lead to a clean, solid installation. Read each section carefully and if a problem or question arises, call your local dealer or Precision Power, Inc. at 1-800-62-POWER.

In selecting a location to mount the amplifiers, there are a few points to consider. Is the amplifier in an area that will allow adequate ventilation? The nature of an amplifier dictates that during operation the amp will get warm. Adequate ventilation is vital to allow the amplifier to dissipate the heat that develops during operation. The design of the heat sink permits the amplifier to draw the heat away from the internal components. This heat is then dissipated into the air. It is important to place the amplifier in a location that provides sufficient airflow, such as the trunk. If placing the amplifier under a seat, care must be taken to ensure that at least two inches of clearance is provided around the amplifier. In no case is it recommended that the amplifier be placed in an enclosed area. If the heat is not allowed to escape, the amplifier will over-heat and go into thermal protection. Another point to consider is that the amplifier be placed in an area that will protect it against physical damage. If the amplifier is placed in the trunk, it should be located where it is not subjected to damage or inadequate cooling due to obstructed air flow or intrusion. If placed under the seat, be sure that it is out of the way of rear passenger's feet, and the seat can move back and forth without coming in contact with the amplifier. Once a location has been selected, the amplifier must be screwed down with #6 screws to prevent it from moving around. This location must be flat to prevent the amplifier from flexing or warping which could result in damage.

**Sedona Mobile Audio's**  
ELEMENTS OF POWER  
430-iX 630-iX

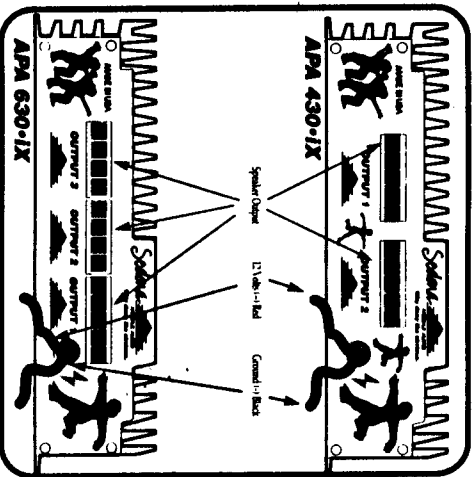
# INSTALLATION

## P O W E R

Before beginning any electrical connections, the negative (-) terminal of the battery must be disconnected. This will prevent accidents that could cause damage to the amplifier, fire, and personal injuries.

The Sedona series amplifiers are designed to operate from a car's positive 12 volt, negative ground electrical systems. The amplifier is shipped with a red 10 gauge power wire that has two in-line fuses. One fuse, connected to the battery, is to protect the power wire in the case it is shorted to chassis ground. If this fuse is deleted and the power wire shorts to ground, a fire will result. The second fuse is located on the end that connects to the amplifier. This fuse is to protect the amplifier from various current overload situations. Deleting or replacing either fuse with a larger value will result in severe damage.

The main power cable should be run from the amplifier location through the vehicle to the battery, avoiding sharp corners, crosses, and sharp body parts. When passing through any metal wall such as the fire wall etc., a grommet must be used to prevent the wire from chafing and charring the hole. Once the power wire has been run to the battery, DO NOT connect it to the positive terminal UNLESS all other system connections have been completed. The power cable is terminated with a large ring connector for connection to the positive terminal of the battery. Once the power cable has been routed to the battery, cut off the excess wire and slip on the fuse cap (provided). Strip back 1/8 inch of insulation and insert the stripped wire in the silver rivet cap (provided) and solder thoroughly. After the solder cools insert the fuse provided and close the fuse holder. Next is the ground wire of the amplifier. Do not extend the ground wire. Locate a metal area near the amplifier—the floor is ideal. Clean an area about the size of a quarter to bare metal. Drill a pilot hole in the middle of this area. BE CAREFUL! Inspect the area underneath to be sure that you are not drilling into wires, brake lines, fuel lines, etc. Screw down the ground cable using the ring provided. After the connection is complete, coat the area with silicone or some similar material to prevent rust.



## R E M O T E T U R N O N

In order for the amplifier(s) to turn on, the remote turn-on wire (blue wire in the speaker harness) must be connected to a switched 12 volt source. Typically, the power antenna remote turn-on lead from the source unit is used. If this is unavailable, a switched 12 volt source must be used. If 2 or more units are being activated by the antenna remote turn-on, it is advisable to let the radio turn on a relay and the relay draw power from an ignition 12 volt source, to turn on the amplifier(s) and accessories.

# INSTALLATION

## S P E A K E R C O N N E C T I O N

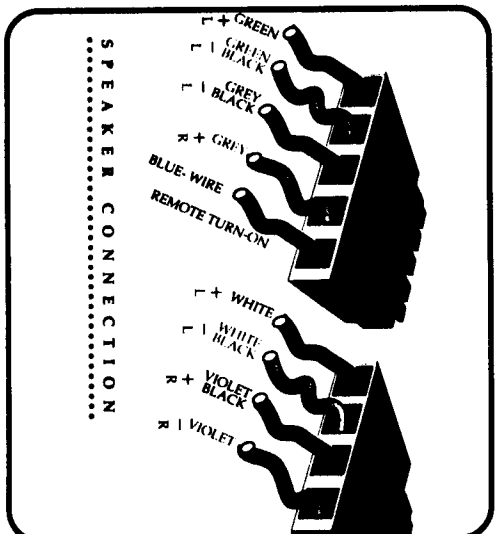
All speaker connections are via a plug-in wire harness (supplied). The harness connection is located on the right side panel of the Sedona amplifier. It is important to use 16 gauge or larger wire for proper signal transfer from the amplifier to the speakers.

**CAUTION!** Never connect any speaker lead to the car chassis or to another lead! For optimum performance, speaker impedance should be 4 ohms or greater, either stereo or bridged.

## B R I D G I N G

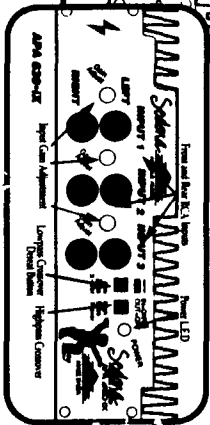
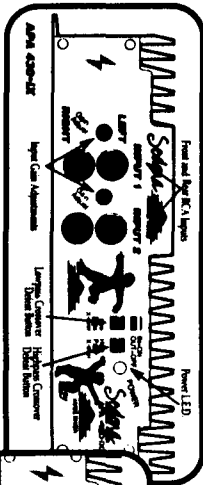
The Sedona APA 430-IX and APA 630-IX are capable of being bridged into a mono output because of the internal design of the amplifier. This feature permits the creation of a mono channel for a subwoofer or center channel. Also, by bridging the amplifier, the APA 430-IX can become two channel stereo or two channel mono, and the APA 630-IX can become two channel stereo with one channel mono or three channel mono.

This is accomplished by using the left channel positive wire as the positive speaker wire and the right channel negative wire as the negative speaker wire. It is important that a minimum 4 ohm impedance is observed. If the impedance drops below 4 ohms while the amplifier is wired in a mono state, the amplifier will go into low impedance protection.



Another benefit of this feature is the ability to run stereo satellites while simultaneously running a mono output from the same output stage (front stage or rear stage). This is accomplished simply by running the stereo speakers normally and tapping into the appropriate wires for the "Mixed Mono" channel (Green (+) and Gray/Black (-) OR White (+) and Violet/Black (-)). Again, impedance level must be observed to maintain no lower than 2 ohms into the stereo channels and no lower than 4 ohms into mono.

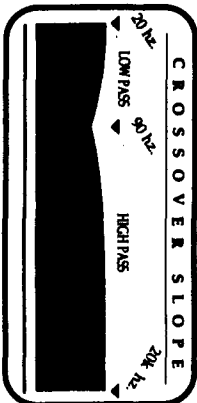
# INSTALLATION



Next to each set of inputs are gain controls. These are used to adjust the input from whatever source is being used. The gain control must be adjusted upon installation of the amplifier. First turn the gain all the way down (counter clockwise). Then turn the source unit's volume two-thirds up. Then adjust the gain control until the desired volume is obtained without audible distortion.

## CROSSOVER

The APA 430-IX and the APA 630-IX have a built-in electronic 2-way crossover which provides a low pass 12dB per octave slope at 90Hz along with a high pass 12dB per octave slope at 90Hz. The low pass and high pass crossovers can be activated or deactivated by the buttons on the left side of the amplifier. This provides greater versatility in your overall system design.

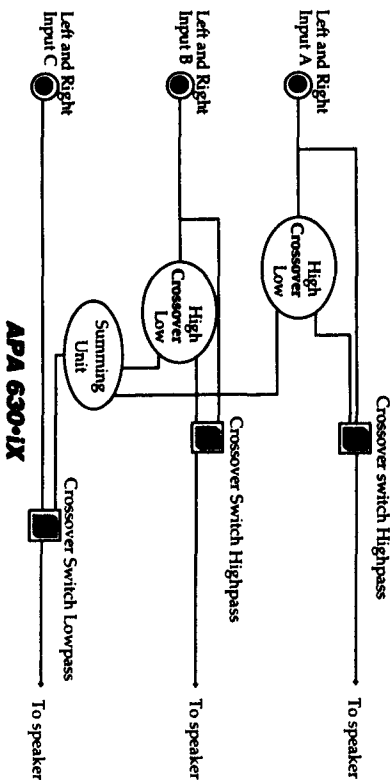
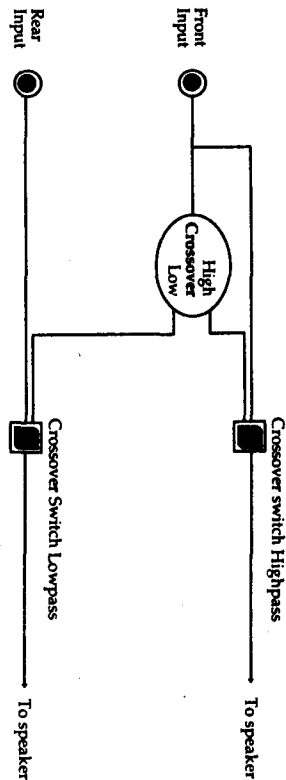


## INPUTS

On the left side panel of the APA 430-IX and the APA 630-IX are a set of RCA low level signal inputs for head units, equalizers, crossovers, etc. The APA 430-IX has 4 RCA inputs which may be used as Front Left, Front Right, Rear Left, and Rear Right OR Left and Right High Pass and Left and Right Low Pass. The APA 630-IX has a Front Left and Right High Pass or Full Range, a Rear Left and Right High Pass or Full Range, and a third Left and Right Full Range.

## SYSTEM DESIGN

On the following two pages, you will find suggested system designs for the APA 430-IX and the APA 630-IX. Because of the versatility of these amplifiers, the possible system configurations are limited only by your imagination. Examine the designs presented and modify to suit your needs. Remember to pay attention to the impedance of the speaker system. The Sedona amplifiers are capable of operation into a 2 ohm load in a stereo configuration and into a 4 ohm load in a bridged mono configuration. However, for optimum performance, a 4 ohm load in stereo and an 8 ohm load in mono are recommended.



# INSTALLATION

Sedona

APA 430-IX

SYSTEM DESIGN

Sedona  
APA 430-IX

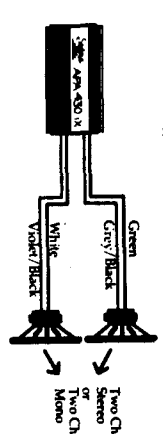
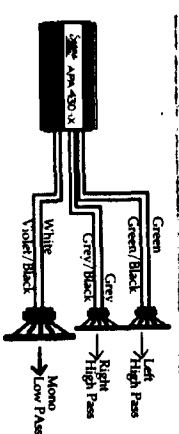
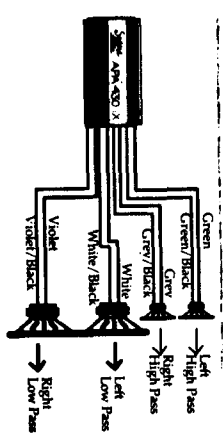
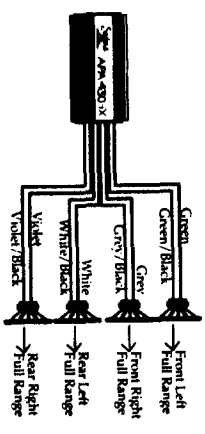


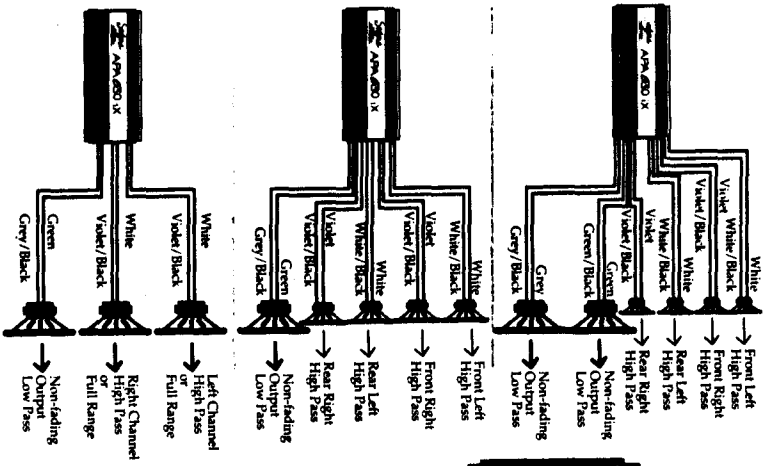
|                                    |                     |
|------------------------------------|---------------------|
| both buttons out                   | <b>Output</b>       |
| Highpass button In                 | Full Range          |
| Lowpass button In                  | Output 2 Highpass   |
|                                    | Output 1 Full range |
|                                    | Output 1 Lowpass    |
|                                    | Output 2 Full range |
| Both buttons In (Input 1 not used) | Output 1 Lowpass    |
|                                    | Output 2 Highpass   |

## APA 430-IX

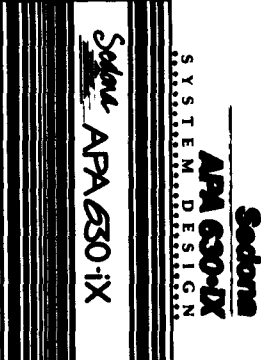
|                                      |                     |
|--------------------------------------|---------------------|
| both buttons out                     | <b>Output</b>       |
| Highpass button In                   | Full Range          |
| Lowpass button In (Input 3 not used) | Output 1 Highpass   |
|                                      | Output 2 Highpass   |
|                                      | Output 3 Full Range |
|                                      | Output 1 Full range |
|                                      | Output 2 Lowpass    |
|                                      | Output 3 Lowpass    |
| Both buttons In (Input 3 not used)   | Output 1 Highpass   |
|                                      | Output 2 Highpass   |
|                                      | Output 3 Lowpass    |

## APA 630-IX





# INSTALLATION



## TROUBLE SHOOTING

If your system fails to operate properly, please refer to this guide. If you are unable to resolve the problem, consult your dealer or call 1-800-62-POWER.

### NO SOUND

Is the power LED illuminated?  
Check fuses in power wire.  
Be sure turn-on lead is connected.

### NO SOUND IN ONE CHANNEL

Check speaker leads and inspect for a short to ground or an open connection.

Check pre-amp leads.  
Reverse left and right leads to see if the problem is before the amplifier.

If the problem is in the unit, have your dealer inspect the unit.

### AMP TURNING OFF AT LOW LEVELS

Check speakers for low impedance or damage.  
Is the amp able to cool properly?

### AMP TURNING OFF AT MEDIUM OR HIGH LEVELS

Check speaker for low impedance or damage.  
Make sure power and ground are secure.  
Does the amp have adequate ventilation?



Precision Power, Inc.

4829 South 38th Street  
Phoenix, Arizona 85040-2964 U.S.A.  
602 / 437-5207 800 / 62-POWER

.....11