

**iSP**  
**Technologies**

ACTIVE  
SERIES



**Audio Transient Suppressor**  
**OWNERS MANUAL**

## IMPORTANT SAFETY INSTRUCTIONS!

**Please read this very carefully before operating this unit**

- Read **ALL** instructions carefully before using this unit.
- Do not operate this unit near water, in the rain, or where there is moisture. If this warning is ignored a serious electrical shock or death may occur.
- Do not attempt to service this unit. No user serviceable parts inside. Refer servicing to qualified, ISP approved service personnel.
- Never remove or defeat the ground connection on the power cord of this unit.
- Care should be taken to avoid spilling any foreign objects or liquid into this unit.
- Failure to follow these instructions may void the warranty.



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# INTRODUCTION

Thank you for your purchase of the ISP Technologies Audio Transient Suppressor. This product provides the user with the comfort of knowing that their speaker system is no longer in jeopardy. The lingering pop noise that is heard when a system is powered on/off is a thing of the past. Simply connect and let the unit do all the work.

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## PRECAUTIONS

**NOTE: IT IS VERY IMPORTANT THAT YOU READ THIS SECTION TO PROVIDE YEARS OF TROUBLE FREE USE. THIS UNIT REQUIRES CAREFUL HANDLING.**

All warnings on this equipment and in the operation instructions should be adhered to and all operating instructions should be followed.

Do not use this equipment near water. Care should be taken so that objects do not fall onto and liquids are not spilled into the unit through any openings.

The power cord should be unplugged from the outlet when the unit is left unused for a long period of time.

DO NOT ATTEMPT TO SERVICE THIS EQUIPMENT. THIS EQUIPMENT SHOULD BE SERVICED BY QUALIFIED SERVICE PERSONNEL ONLY. DO NOT MAKE ANY INTERNAL ADJUSTMENTS OR ADDITIONS TO THIS EQUIPMENT AT ANY TIME. DO NOT TAMPER WITH INTERNAL ELECTRONIC COMPONENTS AT ANY TIME. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL VOID THE WARRANTY OF THIS EQUIPMENT, AND MAY CAUSE A SHOCK HAZZARD.

## THERMAL CONSIDERATIONS

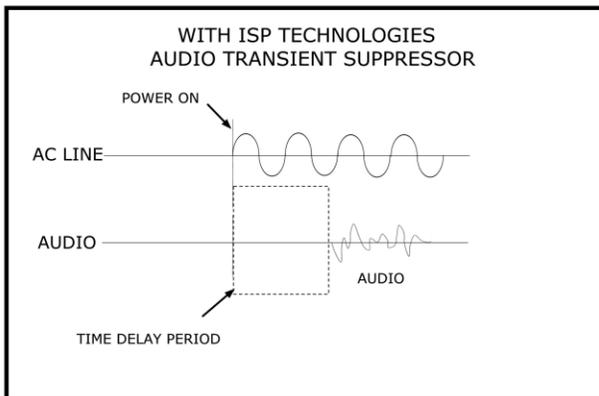
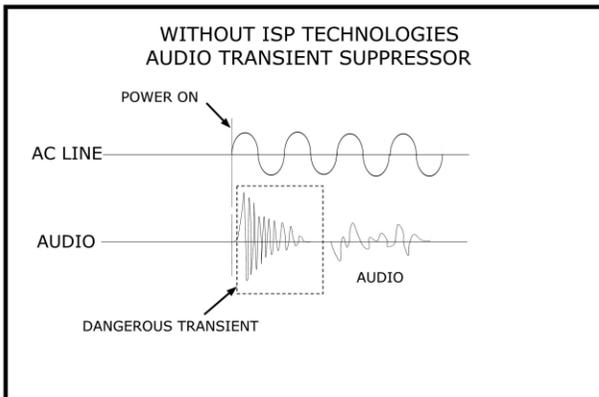
This system generates heat that must be dissipated in order to maintain reliability and insure the amplifier components stay within their operating temperature specs. To accomplish this, the amplifier is mounted onto a heatsink that is vented on the rear of the cabinet. Airflow is forced through the fins via a fan that turns on when needed. It is required that the vents remain free from any obstruction to allow proper ventilation to occur.

In addition, the amplifiers are thermally protected internally via a thermal switch, which will attenuate the signal 40db when the temperature exceeds 120°C. When the temperature drops below a predetermined point, full signal will be restored. ISP tests have shown under extreme conditions that cycling will occur (40 sec. ON, 20 sec. OFF).

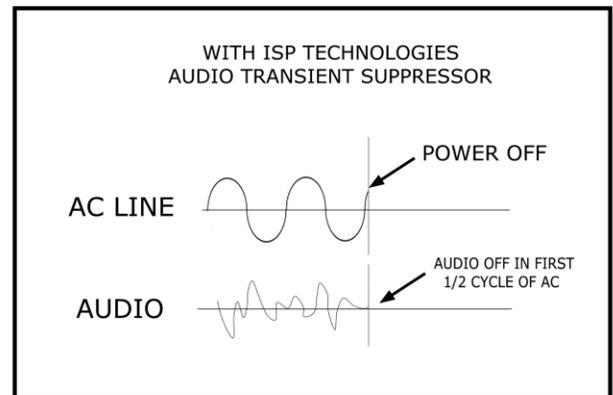
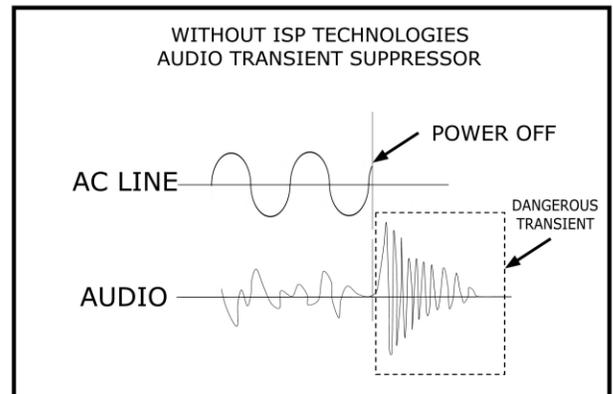
# OPERATION

The Audio Transient Suppressor is designed to eliminate the potential damaging turn on and turn off transient pop that you get when turning on and off your mixer. Most audio engineers know to turn on your mixer first and then power up the power amplifiers in the system and to reverse the order when powering down the system. The problem is that many times systems are damaged by the large turn on and turn off transients due to an untrained operator, power failures, accidental removal of the power (someone tripping on the power cord) or any number of other reasons. The end result can be blown speakers and or power amplifiers. The stress on power amplifiers and speakers that result from a full level turn on and turn off transient can result in damage since the amplifier is typically required to deliver an instantaneous series of spikes that exceed the supply rails of the amplifier. The ISP Technologies Audio Transient Suppressor is designed to eliminate this potential failure.

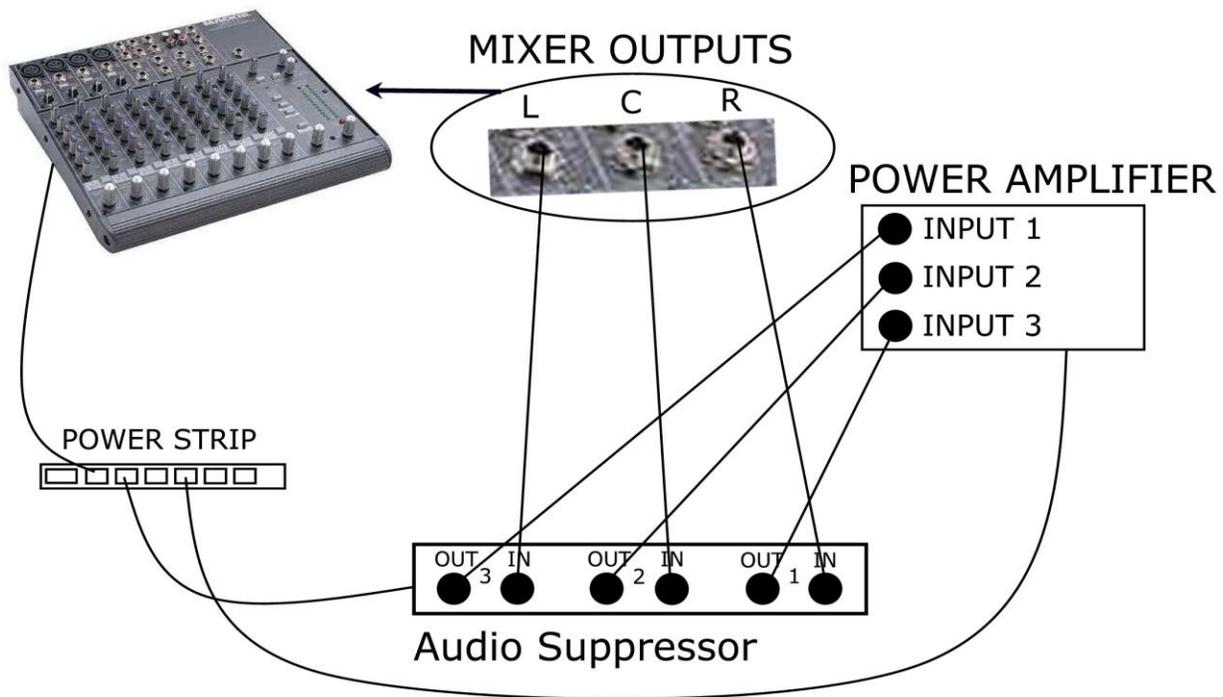
POWER ON WAVEFORMS



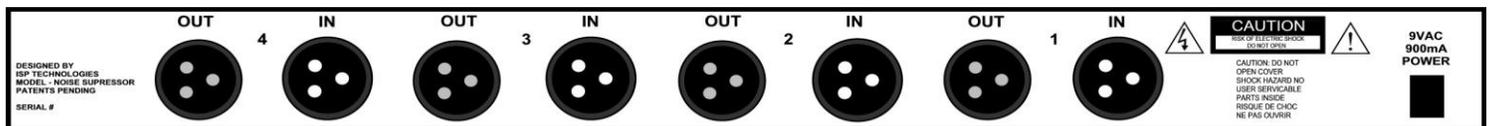
POWER OFF WAVEFORMS



## Principles of the Audio Transient Suppressor operation:



The ISP Technologies Audio Transient Suppressor is designed to connect between the audio output of the main outputs of the front of house mixer and the input to the power amplifiers or powered active speakers. The Audio Transient Suppressor needs to be connected to the switched power circuit of the mixer, which allows the Audio Transient Suppressor to turn on and off at the same time the mixer is powered up and down. Most fixed installations have a single AC circuit that will power up the mixer and any external signal processing units with a single switch. You simply connect the Audio Transient Suppressor to the same circuit or use a power strip as your master on off circuit. The Audio Transient Suppressor has four independent and fully isolated audio channel paths to connect between the mixer output and power amplifier input. When the power is applied, the Audio Transient Suppressor will protect or mute the audio output between the mixer and input of the amplifiers for a period of approximately 4 seconds. On power down the system will sense the removal of AC power in the first ½ cycle and will protect or mute the audio path between the mixer and amplifiers before any transient can appear. The means that even if there is a power outage the system will protect your amplifiers and speakers before any damaging transient is present at the mixer output. The following pages illustrate the waveforms of a typical system and the output of the system with the Audio Transient Suppressor connected.



NOTE: The ISP Technologies Audio Transient Suppressor will eliminate the turn on and turn off transients that occur when switching on a mixer or other external signal processing equipment but will not have any affect on power line surges, lightning strikes or other potential damage from transients in the audio signal during use. ISP Technologies recommends the use of other power line condition or surge suppression devices in conjunction with the Audio Transient Suppressor.

# WARRANTY AND SERVICE

The unit, parts and workmanship are fully guaranteed to be free of defects under normal use and service for a period of 3 years from the date of purchase.

Any damage resulting from the misuse or the failure to follow the precautions and instructions will void the warranty.

In the event that the unit needs to be repaired, please return the unit to ISP Technologies directly. Simply repack the unit, send a copy of the original receipt, a note stating the problem, and send it to:

ISP Technologies, LLC  
5479 Perry Drive Unit B  
Waterford, MI 48329  
Attn: Repair Dept.

All shipping charges must be fully prepaid.

ISP will not be responsible for any damages incurred in shipping of any unit. Any claim will need to be settled with the shipping company.

The warranty will be voided if the serial number has been tampered with in any way.

The warranty card must also be filled out and returned in order to activate the warranty.

Should you have any questions for the repair department prior to returning the product please call 1-(248)-673-7790

NOTE: This Product may be covered under one or more of the following patents or patents pending: 7,035,413; 6,944,305; 6,931,134; 6,831,514; 6,091,013



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