The Sound That Will *Move* You

SWAT-2.4X
STEREO WIRELESS AUDIO TRANSCEIVER

TRANSMITTER   **RECEIVER**

USER'S MANUAL

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EARTHQUAKE.

S O U N D

The Sound That Will *Move* You

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Safety Instructions

Safety First

This document contains general safety, installation, and operating instructions for SWAT-2.4X. It is important to read this user's manual before attempting to use these products. Pay particular attention to the safety instructions.

Symbols Explained:

Appears on the component to indicate the presence of uninsulated, dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of shock.

CAUTION — Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in injury or death.

WARNING — Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the product.

Note: Calls attention to information that is essential to highlight.

Important Safety Instructions

1) Read these instructions in their entirety.

2) Store this manual and packaging in a safe place.

3) Heed all warnings.

4) Follow instructions (do not take short cuts).

5) Do not use this apparatus near water.

6) Clean only with a dry cloth.

7) Do not block any ventilation openings. Install in accordance to the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatuses that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

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10) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments and accessories specified by the manufacturer.

12) Use only compatible rack or cart for final resting position.

13) Unplug this apparatus during lightning storms or when unused for long period of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way such as: power supply cord or plug is damaged, liquid has spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15) To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

This triangle, which appears on your component, alerts you to the presence of uninsulated, dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

This triangle, which appears on your component, alerts you to important operating and maintenance instructions in this accompanying literature.

CE

Unpacking system components

- Keep the original carton and packing materials for future shipment or storage.

- Check for any visual signs of damage. If you encounter any concealed damage, consult your Earthquake Sound dealer before proceeding with unit installation.

- Retain the sales receipt as it establishes the duration of the limited warranty and provides information for insurance purposes.

System installation considerations

There are several factors to consider before installing Earthquake Sound's SWAT-2.4X.

- What are the intended listening zones?

- What system options and accessories might be required for features such as local sources, etc.?

- From where in each zone will the listener prefer to control the system? Where will the remote gains be located? Where will the speakers be located?

- Where will the source equipment be located?

Connection tips

- Keep all power cords away from all signal cables to prevent humming from induced noise.

- Choose reliable signal cables/cords (Earthquake Sound also specializes in high-performance RCA cables).

- All speaker wires that are ran through the walls should be twisted type to reduce potential hum noise pick up.

- Label both ends of all wires with the corresponding room location.

- It is best to use a grounded electrical outlet to power the amplifier. Lack of input ground reference could be unsafe. Consult with your electrical contractor about proper grounding.

Introduction

SWAT-2.4X is Earthquake Sound's wireless audio transceiver that allows you to play audio material from your audio source to almost any speaker wirelessly. Hard wiring your speakers to your sound source can be costly and time consuming. SWAT-2.4X makes install a snap without compromising sound quality for convenience. It is extremely versatile and perfect for apartments or outdoor settings. It even has microphone capability so you can transmit voice as well.
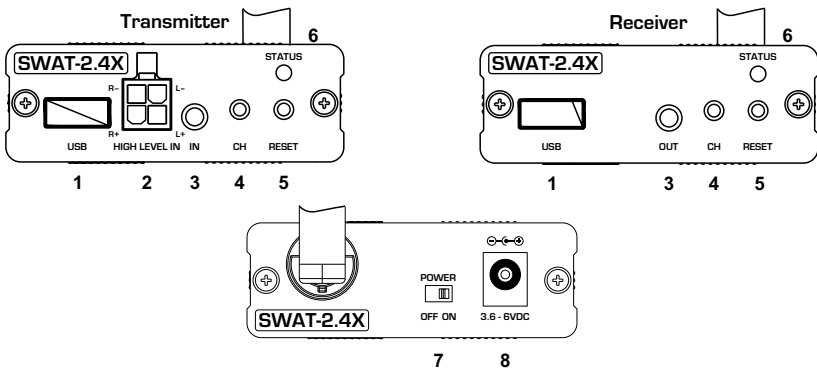
Each set of SWAT-2.4X comes with the following:
- One (1) transmitter
- One (1) receiver
- One (1) 3.5mm-to-3.5mm cord
- Two (2) 3.5mm-to-RCA cords
- Two (2) 100~240V power supplies (5VDC)

If you want the music to play in different areas or on multiple systems, one transmitter can wirelessly connect to multiple receivers (additional receivers can be purchased separately). With 30 broadcast/pairing channels, the chance of interference with other signals is extremely slim. The SWAT-2.4X is also equipped with an advance auto-connect circuitry which allows the receiver(s) to automatically adjust to match the transmitter channel.

Features & Highlights

- 30 broadcast/pairing channels
- Auto-connect circuitry for quick & easy pairing
- Two types of inputs supporting microphones and stereo
- 64kHz 16bit sampling ratio
- Frequency response of 20 Hz to 20kHz (± 1dB)
- One-to-one and one-to-mass capability
- Eliminate hum noise in any system
- Digital transmission
- HDCD sound effect
- < 0.5ms latency
- 95dB S/N ratio

The SWAT-2.4X Overview

1. **USB Port**
   This USB port is used to power the SWAT-2.4X transmitter and/or receiver when using a standard USB-to-USB cable from a computer or amplifier unit.

2. **High Level Input**
   The SWAT-2.4X transmitter can accept high/speaker level inputs with a range of 0.5V to 17 VRMS.

3. **IN / OUT 3.5mm Stereo Jack**
   The SWAT-2.4X transmitter can also accept stereo audio input through the 3.5mm mini jack. Use the 3.5mm stereo out to connect the SWAT-2.4X receiver to an amplifier or powered speaker.

4. **CH (Channel Selector) Button**
   To change the channel on the SWAT-2.4X, simply press the CH button on the transmitter and the receiver will automatically adjust.

5. **RESET Button**
   Press and hold this button for 3 seconds to reset the SWAT-2.4X.

6. **STATUS LED Indicator**
   This LED indicates the operational status of the SWAT-2.4X. For the transmitter, its status LED will stay on when the transmitter is powered on, regardless of signal presence. On the receiver, the status LED will remain off when both the transmitter and the receiver are powered on. The receiver's status LED will light up when it is not paired to any transmitter, or if the transmitter's reset or ch button is pressed.

7. **POWER Switch**
   When this 2-way switch is in the ON position, the SWAT-2.4X is powered on. And when it is in the OFF position, then the SWAT-2.4X is off.

8. **DC Power Receptacle**
   The SWAT-2.4X requires 3.6 to 6 VDC.

WARNING DO NOT use both DC and the USB power supplies at the same time as this will damage the SWAT-2.4X.

Powering & Pairing The SWAT-2.4X

The SWAT-2.4X transmitter and receiver can be powered on either by using the provided 110/220V DC power supplies (to the wall outlets) or by using standard USB-to-USB cables (to a computer/amplifier).

| WARNING | DO NOT power the SWAT-2.4X using both the DC power supplies and USB-to-USB cable at the same time as this will damage the unit. |

Step 1.
Connect the transmitter to the power source and sliding its power switch to the ON position. The transmitter's status LED will flicker and light up, regardless of signal presence.

Step 2.
Connect the receiver to the power source and sliding its power switch to the ON position. The receiver's status LED will flicker, light up for about one second, then turn off. Due to the auto-connect circuitry, this indicates successful pairing between the transmitter and the receiver.

If additional receivers are used, simply repeat step 2 for all the additional receivers.
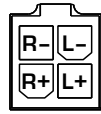
Connecting the SWAT-2.4X Transmitter

The SWAT-2.4X transmitter can accept either high/speaker level input (0.5 to 1.7 VRMS) or stereo audio input (through the 3.5mm mini jack).

High Level Input Connection
Connect the high level plug to your audio source and be sure to follow the input configuration as indicated.
Then connect the plug to the SWAT-2.4X transmitter.

Stereo Audio Input Connection
Using the provided 3.5mm-to-3.5mm or 3.5mm-to-RCA cord, connect the 3.5mm side to the SWAT-2.4X transmitter and the other 3.5mm or RCA end to the audio source.

Note: The SWAT-2.4X is designed to accept only one audio input.

Connecting the SWAT-2.4X Receiver

Using the provided 3.5mm-to-3.5mm or 3.5mm-to-RCA cord, connect the 3.5mm side to the SWAT-2.4X and the other 3.5mm or RCA end to the amplifier, powered subwoofer, powered speaker, or stereo receiver.

Changing the SWAT-2.4X Channel

In case of interference with other signal, simply change the SWAT-2.4X pairing channel by pressing the CH button on the transmitter. Due to the advance auto-connect circuitry, the receiver(s) will automatically adjust its channel to that of the transmitter's.
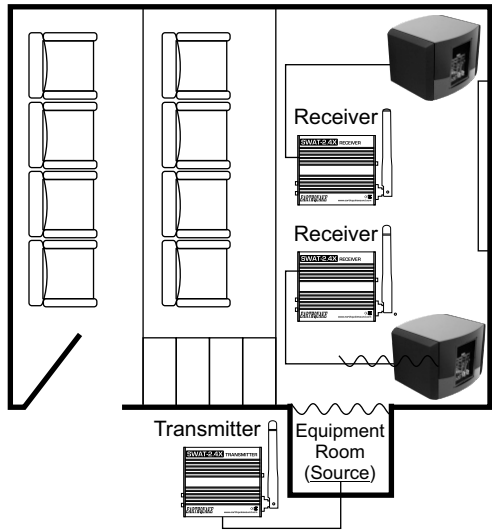
Using SWAT-2.4 in the Media/Theater Room

FOR POWERED SUBS

Components used:
One (1) SWAT-2.4X transmitter
Two (1) SWAT-2.4X receivers
Two (2) Supernova subs

Step 1.
Connect the transmitter to the audio source using either the high level or stereo input.

Step 2.
Connect the two receivers to the powered subs.

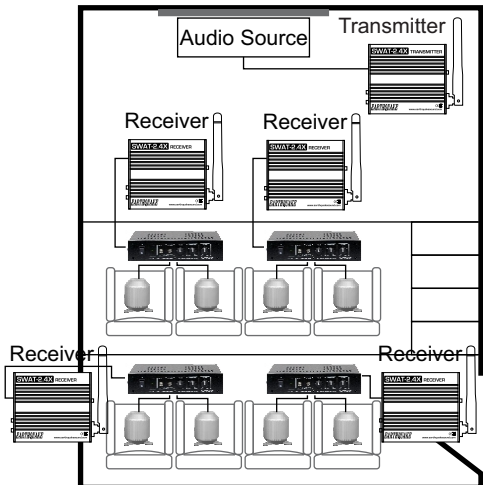The two receivers will automatically pair to the transmitter.

FOR TACTILE TRANSDUCERS

Components used:
One (1) SWAT-2.4X transmitter
Four (4) SWAT-2.4X receivers
Four (4) XJ-300ST amplifiers
Eight (8) MQB1 transducers

Step 1.
Connect the transmitter to the audio source using either the high level or stereo input.

Step 2.
Connect the four receivers to the amplifiers that are powering the tactile transducers.

The four receivers will automatically pair to the transmitter.

Using SWAT-2.4 in the Whole House Setting

FOR INDOOR SYSTEMS (LIVING ROOM, KITCHEN, DINING ROOM, ETC.)

Components used in Media Room:
One (1) SWAT-2.4X transmitter

Components used in Equipment Room:
One (1) Cinénova IR16 8-zone/16-channel amplifier
One (1) SWAT-2.4X receiver

Components used in Living Room:
Six (6) Edgeless ceiling speakers - using zone 1 to 3

Components used in Foyer:
Two (2) Edgeless ceiling speakers - using zone 4

Components used in Kitchen:
Four (4) Edgeless ceiling speakers - using zone 5 and 6

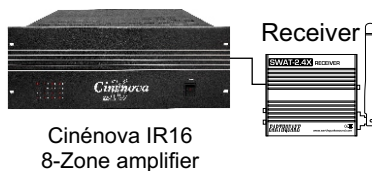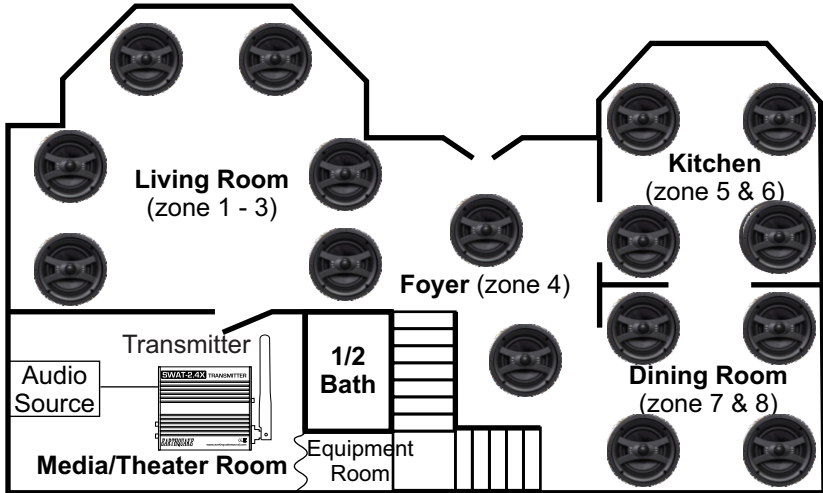Components used in Dining Room:
Four (4) Edgeless ceiling speakers - using zone 7 and 8

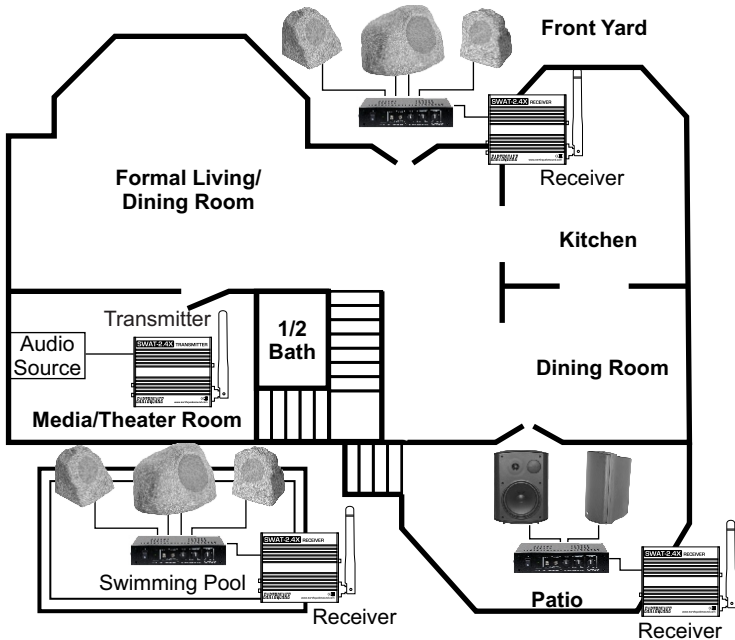Step 1.
Connect the transmitter to the audio source using either the high level or stereo input.

Step 2.
Connect the receiver to the amplifier.

Living Room (zone 1 - 3)

Kitchen (zone 5 & 6)

Foyer (zone 4)

Dining Room (zone 7 & 8)

Transmitter

Audio Source

1/2 Bath

Media/Theater Room

Equipment Room

Receiver

Cinénova IR16 8-Zone amplifier

FOR OUTDOOR SYSTEMS (FRONT YARD, SWIMMING POOL, PATIO, ETC.)

Components used in Media Room:
One (1) SWAT-2.4X transmitter

Components used in Front Yard:
One (1) SWAT-2.4X receiver
One (1) XJ-300ST amplifier
One (1) ROCK-on 2.1 woofer/speakers set

Components used in Swimming Pool/Backyard Area:
One (1) SWAT-2.4X receiver
One (1) XJ-300ST amplifier
One (1) ROCK-on 2.1 woofer/speakers set

Components used in Patio Area:
One (1) SWAT-2.4X receiver
One (1) XJ-300ST amplifier
Two (2) AWS speakers (6" or 8")

Step 1.
Connect the transmitter to the audio source using either the high level or stereo input.

Step 2.
Connect the three (3) receivers to the amplifiers that are powering the speakers/subs.

The three (3) receivers will automatically pair to the transmitter.

Using SWAT-2.4 in Other Locations

FOR CONFERENCE HALLS, PLACES OF WORSHIPS, ETC.

Components used in Equipment Room:
One (1) SWAT-2.4X transmitter

Components used in Conference Hall:
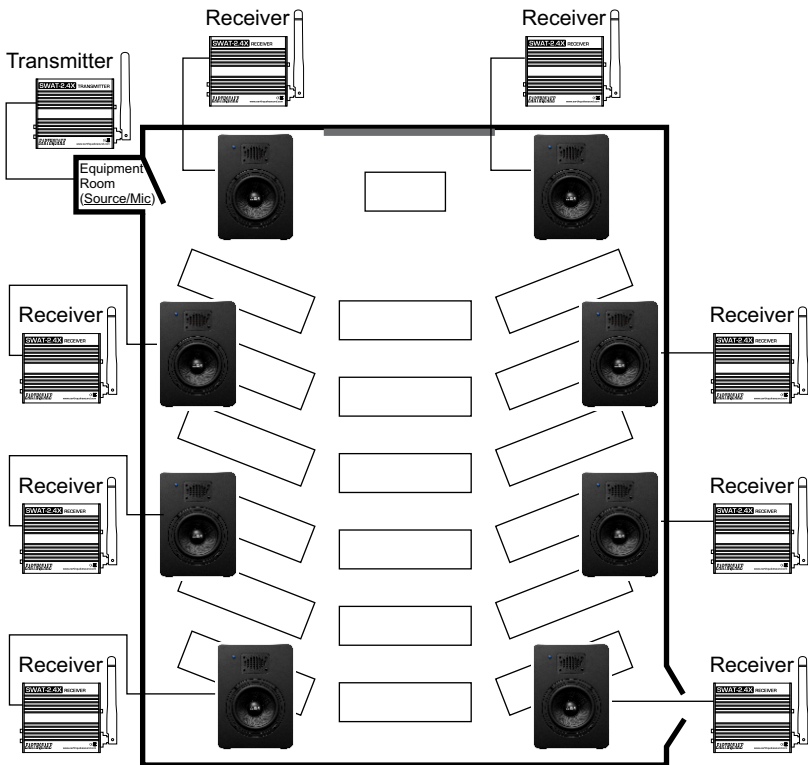Eight (8) MPower powered studio monitors
Eight (8) SWAT-2.4X receivers

Step 1.
Connect the transmitter to the audio source/microphone using either the high level or stereo input. If using microphone, a stereo microphone adapter will be required.

Step 2.
Connect the receivers to the powered monitors.

All eight (8) receivers will automatically pair with the transmitter.

Troubleshooting

TRANSMITTER'S LED LIGHTS UP BUT THERE IS NO SOUND

- Check the source, make sure it is on and properly working.
- Check the connection between the source and the transmitter, make sure it is proper and all cables used are in good working condition.
- Make sure the receiver is turned on and paired to the transmitter.
- Check the connection between the receiver and the amplifier/powered speaker, make sure it is proper and all cables used are in good working condition.
- Make sure the amplifier/powered speaker is turned on.

RECEIVER'S LED LIGHTS UP AND THERE IS NO SOUND

The receiver's status LED will only light up when if the transmitter is turned off or when the transmitter's CH or RESET button is pressed.
- Check to see if the transmitter is on and none of its buttons are pressed.

INTERMITTENT SIGNAL/SOUND

Keep in mind that the SWAT-2.4X requires at 3.6 - 6 VDC power and 0.5 - 17 VRMS high level input.
- Check the connection between the source and the transmitter, make sure it is proper and all cables used are in good working condition.
- Check the connection between the receiver and the amplifier/powered speaker, make sure it is proper and all cables used are in good working condition..
- Change the channel on the transmitter by pressing the CH button on the transmitter.

For more technical support, please contact us by:
US Toll Free   :   1-800-576-7944
Tel   :   +1 (510) 732-1000
E-mail   :   tech@earthquakesound.com

Specifications

	Transmitter	Receiver
Work Voltage	3.6 - 6 VDC	
Work Current	Max 120 mA	Max 35 mA
Operation Temperature	5 - 149 °F (-5 - 65 °C)	
Practical Mode Freq. Range	2400 - 2483 MHz	
Modulation	GFSK	
Band Rate	2 MBPS	
Frequency Stability	± 156 kHz	
Channel Selections	30 Channels	
Practical Working Frequency	2400 - 2483 MHz	
Channel Space	4 MHz	
RF Range	Up to 150 feet (45 m) of open field	
TX Power	0 - 20 dBm	
RX Sensitivity		90 dBm
Input Level	Max 1.0 Vrms	
Input Impedance	10 kOhm	
Input Interface	Mic & High Level Audio	
Stereo Output Level 1		30mW RL = 32 Ohms
Speaker Output Level 2		50mW RL = 16 Ohms
Output Impedance		1 kOhm
In/Out Gain Ratio	1 : 1	
Frequency Response	20 - 20 kHz (± 1 dB)	
Latency	< 0.5 ms	
Sampling Ratio	64 kHz 16 bit	
S/N Ratio	95 dB	
THD	0.3% @ 1 kHz	
Dynamic Range	90 dB	
Channel Separation	70 dB	
Dimensions (W x D x H)	3 1/8" x 2 3/4" x 1" (78mm x 69mm x 24mm)	

One (1) Year Limited Warranty Information

Earthquake warrants the original purchaser that all <u>Factory Sealed New Audio Products</u> to be free from defects in material and workmanship under normal and proper use for a period of <u>one (1) year from the date of purchase</u> (as shown on the original sales receipt with serial number affixed/written on it).

The one (1) year limited warranty period is valid only if an authorized Earthquake dealer properly installs the product and the warranty registration card is properly filled out and sent to Earthquake Sound Corporation. If a non-authorized party installs the product, a ninety (90) day warranty period will be applied.

(A) <u>One (1) year limited warranty plan coverage guidelines:</u>
- Earthquake pays for labor, parts, and ground freight (only in US mainland, not including Alaska and Hawaii. Shipping to us is not covered).

(B) <u>Warning:</u>
- Products (sent in for repair) that are tested by Earthquake technicians and deemed to have no problem will not be covered by the limited warranty. Customer will be charged a minimum of one (1) hour of labor (at ongoing rate) plus shipping charges back to customer.
- Each product sent in for repair must be packaged in its original packaging. Otherwise, **repackaging charges will apply in addition to the labor, parts and shipping charges.**

(C) <u>Earthquake will repair or replace at our option all defective products/parts subject to the following provisions:</u>
- Defective products/parts have not been altered or repaired by anyone other than an Earthquake factory approved technician.
- Products/parts are not subjected to negligence, misuse, accident or damage by improper line voltage.
- Products/parts were used with incompatible products.
- The serial number or any part of the product has been altered, defaced or removed.
- Products/parts have been used in any way that is contrary to Earthquake's written instructions.

(D) <u>Warranty Limitations:</u>
Warranty does not cover products that have been modified or abused, including but not limited to the following:
- Damages to speaker cabinet and cabinet finish due to misuse, abuse or improper use of cleaning materials/methods.
- Bent speaker frame, broken speaker connectors, hole(s) in speaker cone, hole(s) in surround &/ dust cap, and burnt speaker voice coil.
- Fading and/or deterioration of speaker components & finish due to improper exposure to elements.
- Bent amplifier casing, damaged finish on the casing due to abuse, misuse or improper use of cleaning material.
- Burnt tracers on PCB.
- Product/part damaged due to poor packaging or abusive shipping conditions.
- Subsequent damage to other products.

A warranty claim will not be valid if the warranty registration card is not properly filled & returned to Earthquake with a copy of the sales receipt.

(E) <u>Service Request:</u>
To receive product service, contact Earthquake Service Department at (510) 732-1000 and request an RMA number (Return Material Authorization). Items shipped without a valid RMA number will be refused. Make sure you provide us with your complete/correct shipping address, a valid phone number, and a brief description of the problem you are experiencing with the product. In most cases, our technicians might be able to resolve the problem over the phone, thus eliminating the need to ship the product.

(F) <u>Shipping Instructions:</u>
Product(s) must be packaged in its original protective box(es) to minimize transport damage and prevent repackaging cost (at the ongoing rates). Shipper claims regarding items damaged in transit must be presented to carrier. Earthquake Sound Corporation reserves the right to refuse improperly packed product. A copy of the original sales receipt must accompany product returned to service. We encourage you to include with the package a written description of the problem. Ship product to:

Earthquake Sound Corp.
2727 McCone Avenue, Hayward, CA 94545
Tel: (510) 732-1000

You are responsible for the cost of shipping the product to Earthquake Sound Corporation.

(G) <u>Disputes Resolution:</u>
All disputes between clients and Earthquake Sound Corporation resulting from the one (1) year limited warranty policy must be resolved according to the laws & registration of the county of Alameda, California.

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