

Tactile Motion Effects System



TES 100

Installation Manual

Warnings / Table of Contents

Warnings:

1. Read instructions — Read all the safety and operating instructions before operating this product.
2. Heed Warnings — Adhere to all warnings on the product and in the operating instructions.
3. Servicing — Do not attempt to repair or service this product yourself. Refer all servicing to qualified service personnel.
4. Use caution when lifting heavy furniture. Serious injury may occur.
5. The TES-100 Actuator contains a powerful magnet.
6. Use caution when handling TES-100 Actuators near magnetic material (steel).
7. The TES-100 Actuator may become hot during operation.
8. Avoid contact with materials that are sensitive to heat.
9. Do not tip furniture with Actuators installed. Doing so may result in damage to Actuators.
10. Do not slide furniture with Actuators installed. Doing so may result in damage to Actuators.
11. Do not allow metal objects to touch the Actuator Binding Posts. Doing so may cause damage to the amplifier.
12. Do not expose the TES-100 Actuator to excessive amounts of moisture.

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Thank You and Welcome to Crowson

Congratulations on your purchase of a **TES-100 Tactile Motion Effects System (TES-100 Motion System)**. The Crowson Technology TES-100 Actuator delivers the world's most true-to-life low frequency motion effects. The integration of the TES-100 System with your home theater or audio system delivers accurate, ultra-low frequency motion for a visceral experience that is otherwise impossible to achieve.

Ultra-low frequencies exist in the natural world as inaudible motion, experienced largely through our sense of touch rather than through our ears. Examples of real world events that produce frequencies in this range include everything from the pluck of a double-bass string, to a roaring jet engine, to an Earth-shuddering explosion. The lower the frequency of the event, the less we "hear" and the more we "feel" it. The TES-100 Actuator, powered by Crowson's patented LDD™ (Linear-Direct-Drive) Technology, is the only device of its kind able to achieve audiophile-grade accuracy and is a proud addition to any fine home theater or audio system.

To experience the full complement of low frequency motion from any soundtrack, it is important to utilize more than the sub/LFE channel alone. Crowson therefore facilitates and recommends a three (3) channel input. You can also experience STEREO ("steered") low-frequency motion with Crowson's TES-100 Stereo Motion System. Watching a powerful stock car zoom from left to right across your display now means FEELING the ground-quaking engine racing from left to right in your seat! Stereo motion requires a Crowson Bass Management Pre-Amplifier and/or Integrated Stereo Motion Amplifier.

Motion Isolator

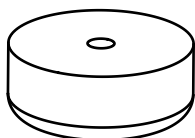


Figure 1

TES-100 Actuator

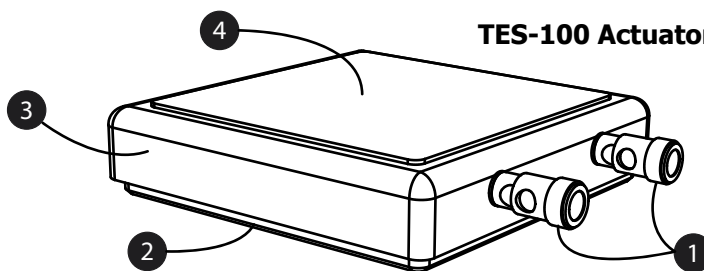


Figure 2

I. Product and Performance:

TES-100 Actuator: The unique TES-100 Actuator is unlike any other "low-frequency effects" device in the world. Assembled and tested by hand in California, each Actuator is a precise, high-end device that represents the finest in modern audio/home theater engineering. The TES-100 is driven by patented LDD™ (Linear-Direct-Drive) technology which effectively translates audio signals into the world's most true-to-life **Tactile Motion**. In a separate league from "shaker" devices, whose performance can be severely limited in both frequency response range and linearity, the TES-100 is the most accurate way to experience ultra low-frequency, visceral effects (ref fig.2).

TES-100 Actuator Features (ref fig.2):

- 1 Gold Plated Binding Posts—accepts bare wire or "banana" style plugs.
- 2 Nickel-coated lower plate with nylon feet—improves long-term durability.
- 3 Aluminum housing—helps regulate operating temperature for high reliability.
- 4 Traction Pad on Stainless Steel Top Plate—adds extra grip for sure "footing".

Motion Isolators: Special Motion Isolators are provided to support and level your furniture. Motion Isolators are soft, mark-free, rubber feet that help your furniture respond to motion efficiently and accurately (ref: fig. 1).

Performance: Just as loudspeakers sounds best in an acoustically suited room, and a projector performs best under certain light and screen conditions, tactile motion can be optimized with well-suited furniture and flooring. Hard flooring with a rigid foundation is best for crisp articulate motion. Solid, well-made reclining theater chairs will help to achieve the best possible performance. Crowson collaborates with and recommends many of the finest theater seating manufacturers in the world, selected specifically for their well-constructed designs. Visit www.crowsontech.com for a list of recommended theater seat manufacturers.

Installation TES-100 Stereo Motion System

II. Installation

A: TES-100 Stereo Motion System

System includes: two (2) TES-100 Actuators and two (2) Motion Isolators*

1 Install Motion Isolators:

If possible, remove all of the furniture supporting feet. Position two Motion Isolators in place of the front supporting feet (ref: fig. 3). Orient each Isolator such that the flat side faces upward (open side down). Use the supplied #8 wood screw and washer to secure the Motion Isolators. A 1/8 inch pilot hole may be necessary. If removal of the furniture feet is impractical, simply place the Motion Isolators under the supporting feet (ref: fig. 4).

2 Connect Actuators to Amplifier:

If using a Crowson Integrated Stereo Motion Amplifier, connect the signal wires according to fig.5. If you wish to use a non-Crowson stereo amplifier, connect the signal wires according to fig.6. TES-100 Actuators should be powered by an amplifier producing between 50 and 500 Watts RMS per channel. Without the use of a Crowson Bass Management Pre-Amplifier, standard audio amplifiers are unsuited to power TES-100 Actuators.

Use standard speaker wire to connect the actuators to the dedicated stereo amplifier. Ensure that the polarity (positive and negative) between the amplifier and TES-100 Actuator is consistent. Use 18AWG or larger wire. Binding posts accept banana-style plugs or bare wire. If using bare wire, strip 1/2 inch of insulation from the end. Depress the binding posts to open the wire terminals and insert the bare wire or banana plugs.

3 Install Actuator:

Place two TES-100 Actuators under the chair in place of the rear supporting feet. (Actuators may be placed under the rear or front feet, though rear feet may afford the Actuators more protection from errant objects.) If the chair's supporting feet are not removed, place the rear feet on the center of the TES Actuators. Orient the TES Actuator such that the binding posts face towards the front of the couch or chair (ref: fig. 3).

*Note: Additional Motion Isolators are available for seating with more than four (4) feet, such as sectional couches.

Attachment to Furniture

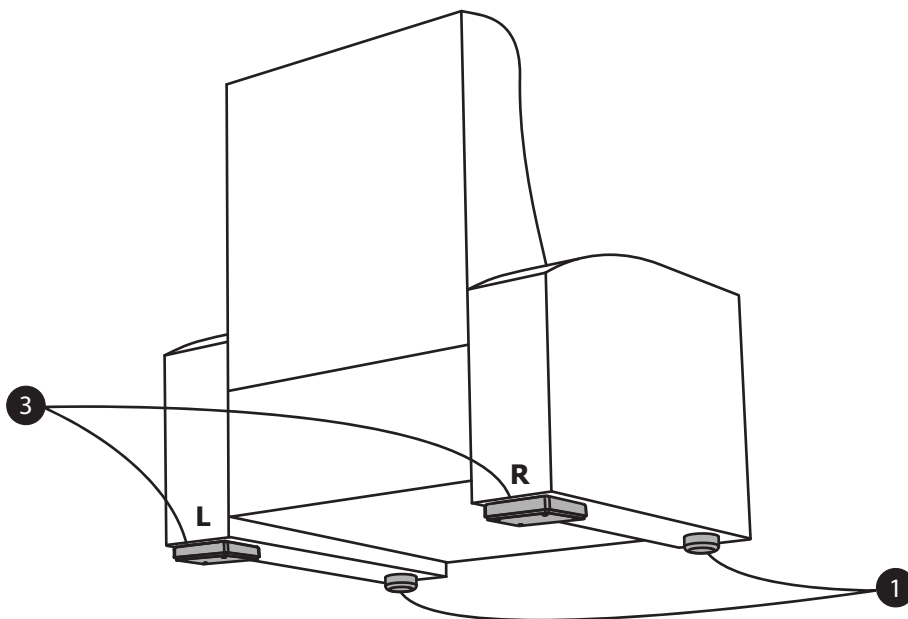


Figure 3

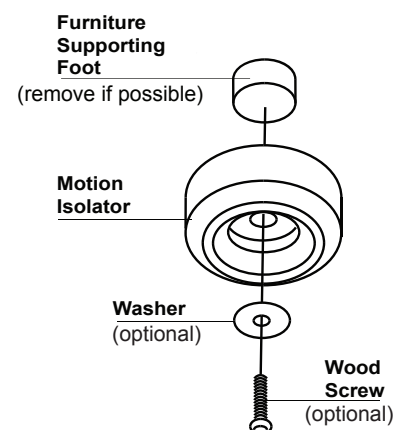


Figure 4

TES-100 Stereo Motion System Installation

System connections

Option 1: Using Crowson Integrated Stereo Motion Amplifier

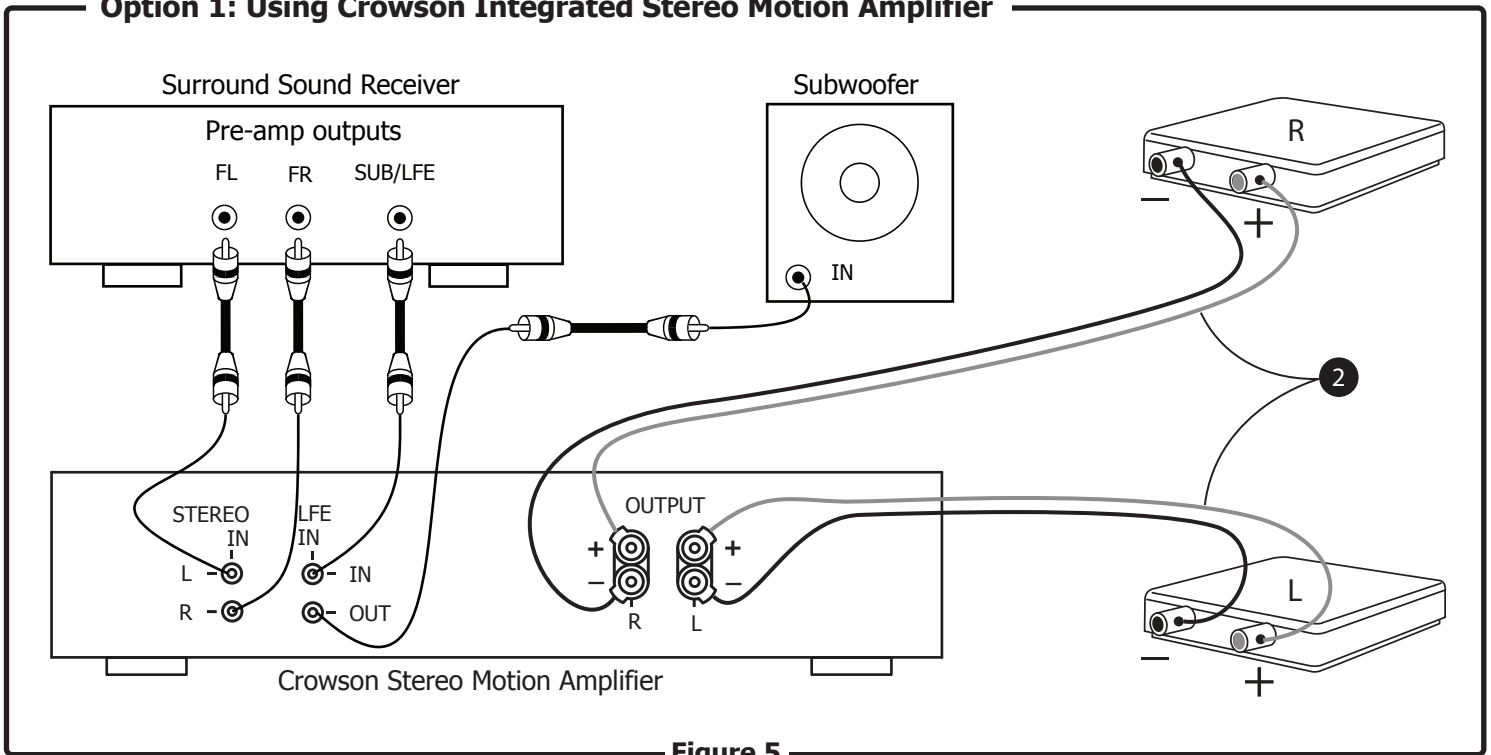


Figure 5

Option 2: Using Crowson Pre-Amplifier and Non-Crowson Power Amplifier

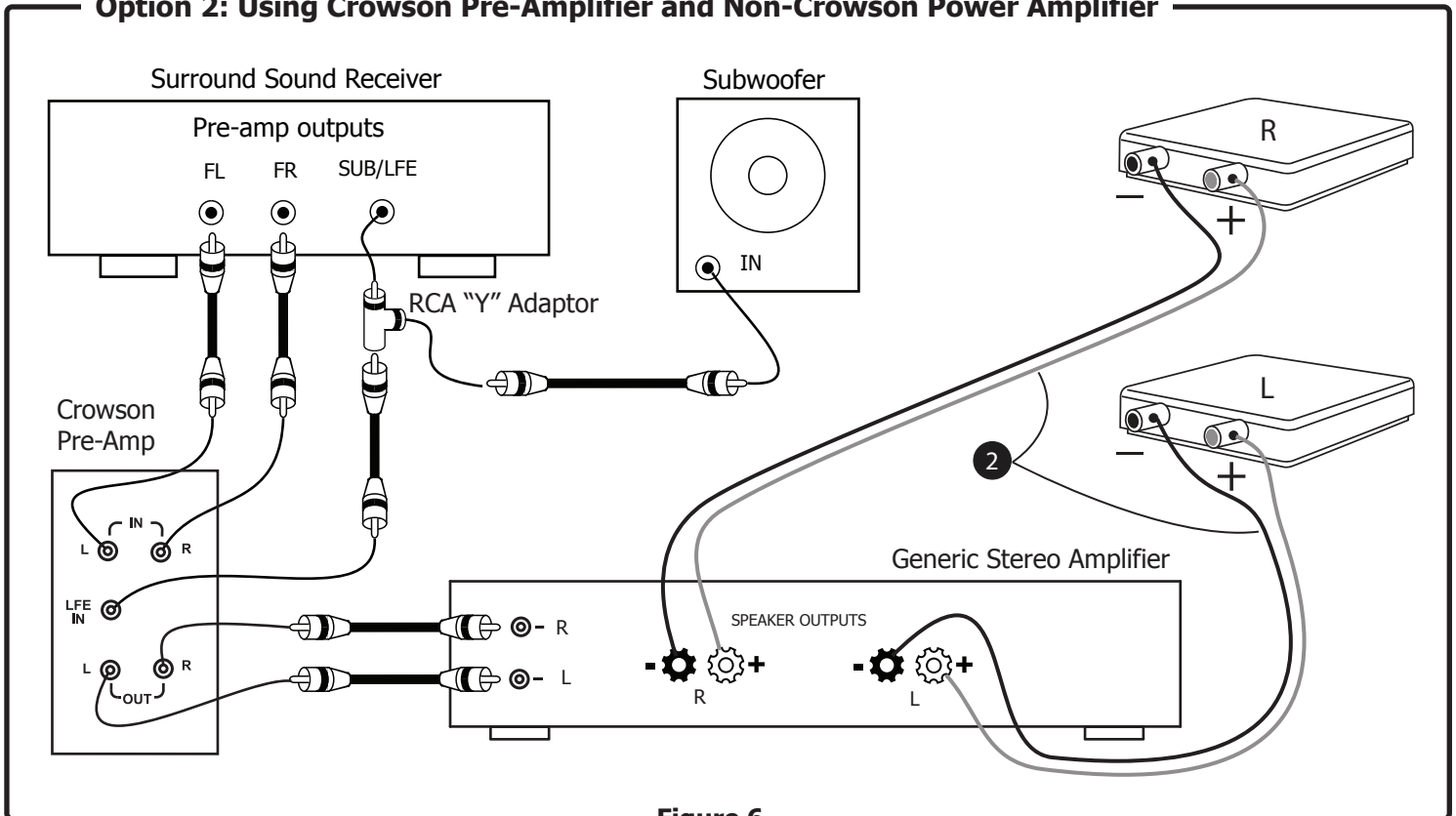


Figure 6

Installation

TES-100 Mono Motion System

B. TES-100 Mono Motion System:

System includes: one (1) TES-100 Actuator and three (3) Motion Isolators*

1 Install Motion Isolators:

If possible, remove all of the furniture's supporting feet. Position three Motion Isolators in place of the supporting feet (ref: fig. 7). Orient each Isolator such that the flat side faces upward (open side down). Use the supplied #8 wood screw and washer to secure the Motion Isolator. A 1/8 inch pilot hole may be necessary. If removal of the furniture's feet is impractical, simply place the Motion Isolators under the supporting feet (ref: fig. 8).

2 Connect Actuators to Amplifier:

If using a Crowson Integrated Motion Amplifier, connect the signal wires according to fig.9. If you wish to use a non-Crowson amplifier, connect the signal wires according to fig.10. The TES-100 Actuator should be powered by an amplifier producing between 50 and 500 Watts RMS. Without the use of a Crowson Bass Management Pre-Amplifier, standard audio amplifiers are unsuited to power TES-100 Actuators.

Use standard speaker wire to connect the actuator to the dedicated amplifier. Ensure that the polarity (positive and negative) between the amplifier and TES-100 Actuator is consistent. Use 18AWG or larger wire. Binding posts accept banana style plugs or bare wire. If using bare wire, strip 1/2 inch of insulation from the end. Depress the binding posts to open the wire terminals and insert the bare wire or banana plugs.

3 Install Actuator:

Place the TES-100 Actuator under the chair in place of a rear supporting foot. (Actuator may be placed under the rear or front feet, though rear feet may afford the Actuator more protection from errant objects.) If the chair's supporting feet are not removed, place the rear foot on the center of the TES-100 Actuator. Orient the TES Actuator such that the binding posts face towards the front of the couch or chair (ref: fig. 7).

*Note: Additional Motion Isolators are available for seating with more than four (4) feet, such as sectional couches.

Attachment to Furniture

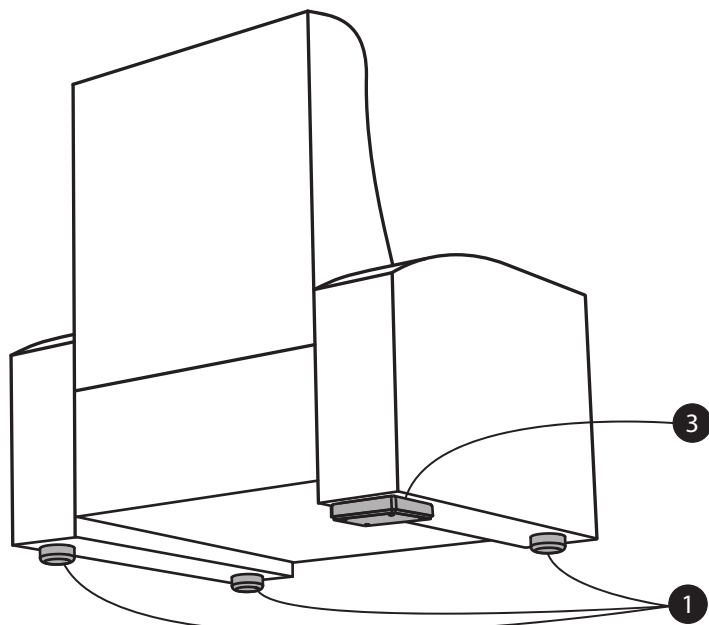


Figure 7

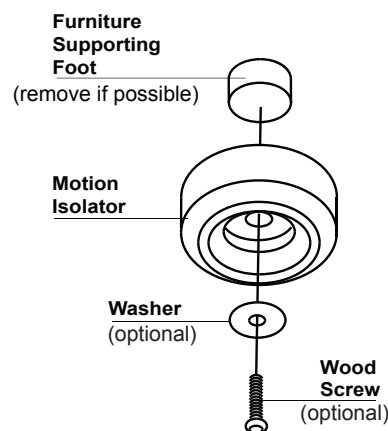


Figure 8

System Connections

Option 3: Using Crowson Integrated Stereo Motion Amplifier

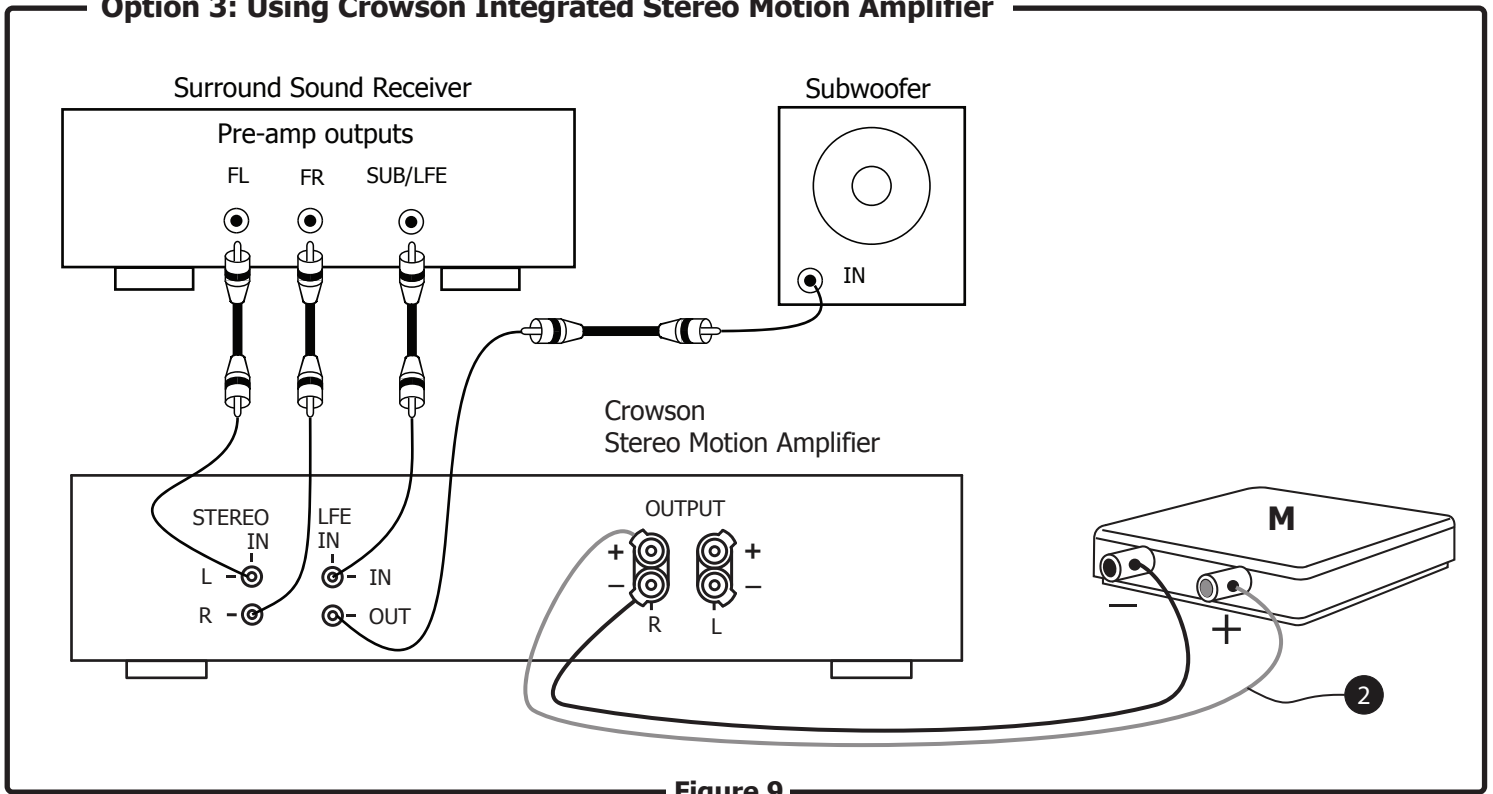


Figure 9

Option 4: Using Crowson Pre-Amplifier and Non-Crowson Power Amplifier

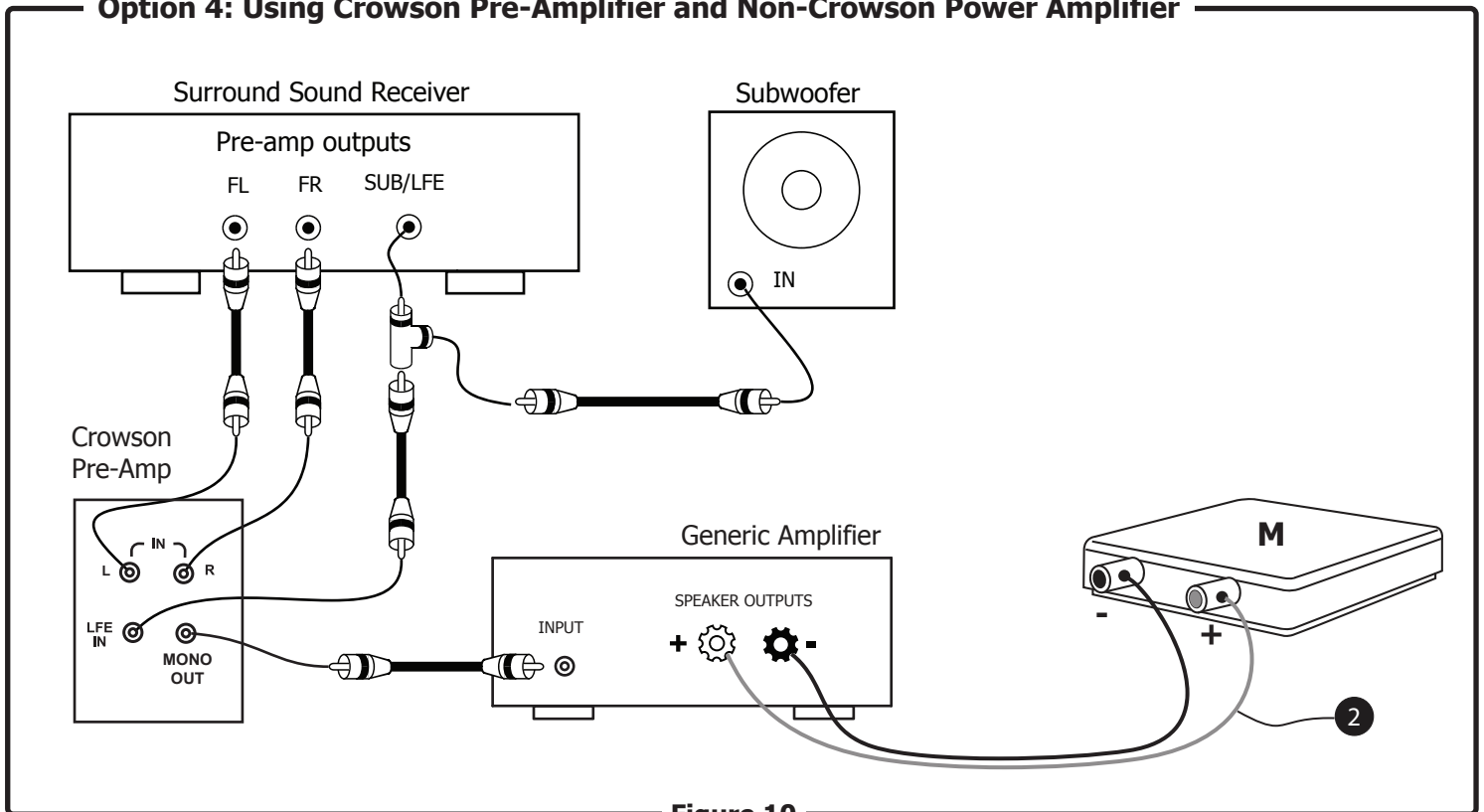


Figure 10

