

# SPLIT Mix4

*Passive Four Channel Stereo/Mono Mixer/Splitter*

## Artcessories



## User's Manual



## IMPORTANT SAFETY INSTRUCTION – READ FIRST



This symbol, whenever it appears, alerts you to the presence of uninsulated dangerous voltage inside enclosure-voltage that may be sufficient to constitute risk of shock.



This symbol, whenever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

**Read Instructions:** Retain safety and operating instructions for future reference. Heed all warnings printed here and on the equipment. Follow the operating instructions printed in this user guide.

**Do not open:** There are no user serviceable parts inside. Refer any service work to qualified technical personnel only.

**Grounding:** Only connect the unit to equipment with properly grounded mains power. Do not defeat the grounding and polarization means of the power cord plug of the connected equipment. Do not remove or tamper with the ground connection on the power cord of the connected equipment.

**Environment:** Protect from excessive dirt, dust, heat, and vibration when operating and storing. Avoid tobacco ash, drink spillage and smoke, especially that associated with smoke machines.

**Handling:** Protect the controls from damage during transit. Use adequate padding if you need to ship the unit. To avoid injury to yourself or damage to the equipment, take care when lifting, moving or carrying the unit.

**Servicing:** Refer servicing to qualified technical personnel.

**Installation:** Install the unit in accordance with the instructions printed in the user guide.

## **INTRODUCTION:**

Thank you for purchasing Applied Research and Technology's SPLITMIX4. The SPLITMix4 is a fully passive hybrid mixer that offers a wide variety of configurations. Mix 4 stereo input channels down to 1 stereo output, split a stereo input signal to distribute 4 stereo output channels, or combine the configurations for a wide range of applications. You can even configure the SPLITMlx4 as 4 stereo input channels thru 4 independent level attenuators to 4 stereo output channels.

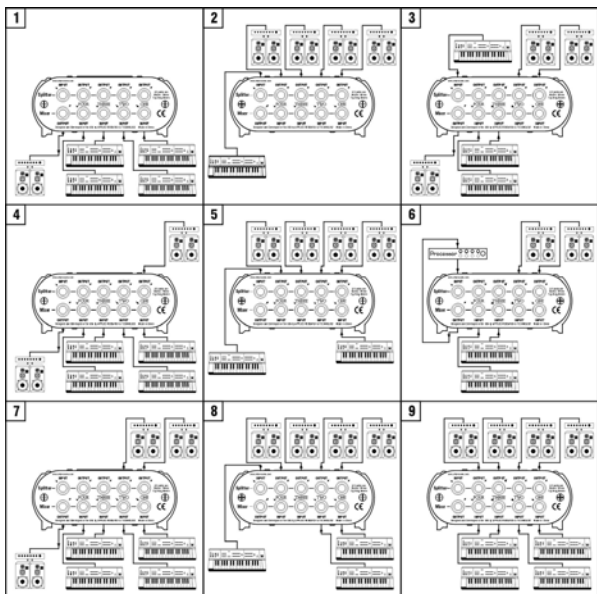
Independent stereo level controls are provided on each channel. All ¼-inch connections are stereo TRS (Tip, Ring, Sleeve) and all channel connections have intelligent switching to allow for a wide variety of configurations. Plugging into a mix input channel removes it from the splitter bus, and plugging into a splitter output channel removes it from the mix bus. Stereo or mono operation is determined by the type of ¼-inch plug and cabling that you use.

The fully passive design of the SPLITMix4 has no active circuitry to add noise or distortion, and virtually any signal level can be handled. The Level attenuators cover a wide range and offer over 90dB of attenuation and channel isolation. The SPLITMix4 is designed primarily as a line level device with medium input and output impedances. Low impedance microphones, speakers,

headphones, and high impedance instrument pickups need an additional amplifier, but any other audio equipment should work well with the SPLITMix4.

## **APPLICATIONS:**

The following chart shows 9 ways to configure the SPLITMix4 for a wide range of applications. Stereo keyboards are shown as the source but any line level signal will work. Stereo powered speakers are shown as the load but the outputs will work just fine into a mixer, HiFi system, computer, or instrument amplifier. All connections can be stereo or mono.



**Application Chart**

## Application Chart Descriptions

**Figure 1.** Traditional 4-in 1-out mixer with separate level control for each channel.

**Figure 2.** 1-in 4-out “distribution mixer” configuration, where each output channel can control different audio zones.

**Figure 3.** Ch3 and 4 mix 2 sources into 1 output, while Ch1 and 2 provide 2 outputs from the splitter input source.

**Figure 4.** Ch2, 3, and 4 mix 3 sources into 1 output, while Ch1 input passes thru level control to Ch1 output.

**Figure 5.** Splitter input feeds Ch2, 3, and 4 outputs, while Ch1 input passes thru level control to Ch1 output.

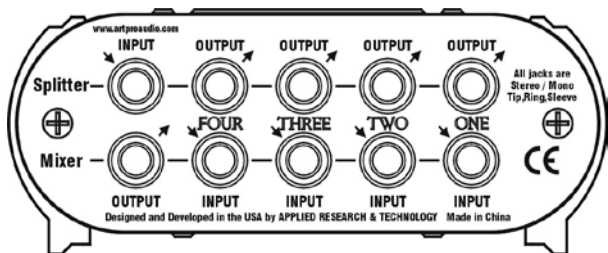
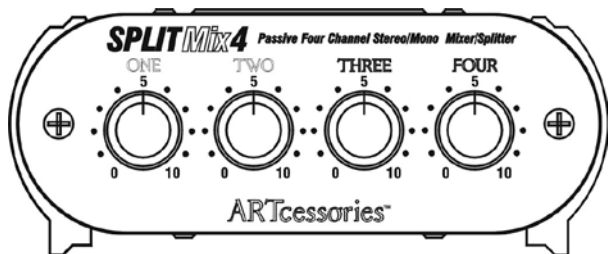
**Figure 6.** Ch3 and 4 sources are mixed and fed to external processor. Processor output is then split to Ch1 and 2 outputs.

**Figure 7.** Ch3 and 4 mix 2 sources into 1 output, while Ch1 and 2 inputs feed Ch1 and 2 outputs with independent level controls.

**Figure 8.** Splitter input feeds Ch3 and 4 outputs, while Ch1 and 2 inputs feed Ch1 and 2 outputs with independent level controls.

**Figure 9.** 4 independent signal sources feed 4 independent outputs with separate level controls on each channel.





**FRONT AND REAR UNIT LAYOUT**

## **SPECIFICATIONS:**

<b>Frequency Response:</b>	20Hz – 20kHz, +/-1dB
<b>THD:</b>	<.005% @ 1kHz (typical)
<b>Phase Response:</b>	<10 degrees @ 20kHz
<b>Input/Output Connections:</b>	¼-inch TRS stereo
<b>Input Impedance:</b>	25k - 100k Ohms
<b>Output Impedance:</b>	1k - 4k Ohms
<b>Insertion Loss:</b>	12dB (typical)
<b>Maximum Attenuation:</b>	>90dB (typical)
<b>Channel Isolation:</b>	>90dB (typical)
<b>Power Requirements:</b>	None (fully passive)
<b>Dimensions HxWxD (in):</b>	1.85 x 4.6 x 4.1
<b>HxWxD (mm):</b>	47 x 117 x 104
<b>Weight (lbs/kg):</b>	0.84 / 0.38

## **WARRANTY INFORMATION:**

### **Limited Warranty (USA only)**

Applied Research and Technology will provide warranty and service for this unit in accordance with the following warrants:

Applied Research and Technology, (ART) warrants to the original purchaser that this product and the components thereof will be free from defects in workmanship and materials for a period of **three** years from the date of purchase. Applied Research and Technology will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to the factory service department or authorized service center, accompanied by proof of purchase date in the form of a valid sales receipt.

### **Exclusions:**

This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. This warranty is void if the serial number is altered, defaced, or removed.

ART reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install the same on products previously manufactured.

ART shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitations of incidental

or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights and you may have other rights, which vary, from state to state. The warranty terms listed above are only valid within the United States of America. For units purchased outside the United States, an authorized distributor of Applied Research and Technology will provide service. For information on warranty and service policies outside of the U.S., please contact your local distributor.

Please fill in the following information for your reference:

Date of purchase: \_\_\_\_\_

Purchased from: \_\_\_\_\_

## SERVICE:

The following information is provided in the unlikely event that your unit requires service.

1. Be sure that the unit is the cause of the problem. Check to make sure that the unit has power supplied, that all cables are connected correctly, and that the cables themselves are in working condition. You may want to consult with your dealer for assistance in troubleshooting or testing your particular configuration.
2. If you believe that the ART unit is at fault, go to [www.artproaudio.com](http://www.artproaudio.com). Select "Support", then "Return Authorization Request" to request a return authorization number.
3. If you are returning the unit for service, pack the unit in its original carton or a reasonable substitute. The original packaging may not be suitable as a shipping carton, so consider putting the packaged unit in another box for shipping. Print the RA number clearly on the outside of the shipping box. Print your return shipping address on the outside of the box.
4. Include with your unit: a note with the RA number and your contact information, including a return shipping address (we cannot ship to a P.O. box) and a daytime phone number, and a description of the problem, preferably attached to the top of the unit. Also include a copy of your purchase receipt.





**[www.artproaudio.com](http://www.artproaudio.com)**

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**SPLITMix4**

**SM4-5004-101**

**V1.1**