

Audio Merger

User Manual

Preface

The purpose of this section is to ensure that the user is able to use the product correctly through this manual in order to avoid danger in operation or property damage. Before using this product, please read the product manual carefully and keep it for future reference.

Outlined

This manual applies to Audio Merger.

This manual describes the functions and use of the various functional modules of the Audio Merger, and guides you through the installation and commissioning of the Audio Merger.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 Note	Provides additional information to emphasize or supplement important points of the main text.
 Caution	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 Danger	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

Safety Instructions

Danger

To ensure reliable use of the equipment and the safety of personnel, please observe the following during installation, use and maintenance:

- During the installation and use of the equipment, all electrical safety regulations of the country and the region of use must be strictly observed.
- Keep the working environment well ventilated so that the heat generated by the equipment during operation can be discharged in time to avoid damage to the equipment due to excessive temperature.
- Always unplug the unit's power adapter from the AC power outlet before: A. Removing or reinstalling any part of the equipment; B. Disconnecting or reconnecting any electrical plug or connection of the equipment. Do not operate with electricity.

- There are AC high-voltage parts in the equipment, non-professionals should not disassemble them without permission to avoid the risk of electric shock. Do not repair the equipment privately to avoid aggravating the damage.
- Do not spill any corrosive chemicals or liquids on or near the equipment.
- If the unit emits smoke, odour or noises, turn off the power immediately and unplug the power cord, and contact your dealer or service centre.
- If the appliance is not working properly, contact the shop where you purchased the appliance or the nearest service centre and do not disassemble or modify the appliance in any way. (We cannot be held responsible for problems caused by unapproved modifications or repairs).

**Caution**

- Do not drop objects on the equipment or vibrate the equipment vigorously, and keep the equipment away from locations with magnetic field interference. Avoid installing the equipment in a place where the surface vibrates or is susceptible to shock (neglecting this may damage the equipment).
- Do not use the equipment in high temperature, low temperature or high humidity environments. Refer to the equipment's data sheet for specific temperature and humidity requirements.
- Use the unit indoors, not in an exposed installation where it may be exposed to rain or extreme humidity.
- When the equipment is not used for a long period of time or in a humid and dewy environment, the main power supply of the equipment should be switched off.
- When cleaning the equipment, please use a sufficiently soft dry cloth or other alternatives to wipe the internal and external surfaces, do not use alkaline detergent to wash, and avoid hard objects to scratch the equipment.
- Please keep all the original packaging materials of the equipment properly, so that in case of problems, use the packaging materials to pack the equipment and send it to the agent or return it to the manufacturer for processing. We will not be responsible for any accidental damage in transit not caused by the original packaging materials.

**Note**

- Requirements for the quality of installation and commissioning personnel
Qualifications or experience in the installation and commissioning of audio and video systems and qualifications to perform related work, in addition to the knowledge and operational skills listed below.
 - Basic knowledge and installation skills of audio and video systems and components.
 - Basic knowledge and skills in low voltage cabling and wiring of low voltage electronics.
 - Basic audio and networking knowledge and skills and the ability to read and understand the contents of this manual.

TABLE OF CONTENTS

Chapter 1 Product Introduction	1
1.1 Introduction	1
1.2 Product Features	1
Chapter 2 Interface Description	1
Chapter 3 Application Scenarios	2
Chapter 4 Specification	2

Chapter 1 Product Introduction

1.1 Introduction

This is a professional-grade 3-in-1 audio mixer designed for broadcast, live sound, recording studios, and AV system integration. The device supports merging three independent input signals (balanced or unbalanced line level) into a single output, ensuring lossless blending and low-noise transmission. Featuring a built-in isolation transformer, it effectively eliminates ground loop interference and supports long-distance cabling (>100 meters). Offering superior balance between flexibility and universal connectivity, this device is ideal for multi-source audio mixing scenarios such as conference systems or multi-device monitoring setups.

1.2 Product Features

- ✧ 3-in-1-out merging: Three XLR inputs to a single XLR output, supporting line-level or mic-level signals with no signal attenuation or distortion;
- ✧ Noise Isolation: Built-in isolation transformer with >50 dB ground loop suppression, eliminating hum and EMI interference;
- ✧ Professional Connectivity: XLR balanced inputs, for seamless integration into PA or AV systems;
- ✧ Zero-Latency Design: 0 transmission latency ensures real-time synchronization;
- ✧ Power Requirements: No power supply required;
- ✧ Rugged Construction: Compact metal housing, suitable for environments from 0° C~50° C.

Chapter 2 Interface Description



- ① 3 XLR balanced input connectors;
- ② 1 XLR output connectors.

Chapter 3 Application Scenarios

- Broadcast Studio: Merges multiple line-level sources into a single output for primary and backup console inputs.
- Live PA System: Mixes keyboard, microphone, or auxiliary sources.
- AV Integration: Merges audio from multiple devices in conference rooms, providing clean output to amplifiers.
- Recording Studio: Bridges multitrack signals to monitoring systems, preventing noise coupling.

Chapter 4 Specification

Category	Parameter Item	Parameter Description
Audio Performance	Input Channels	3 x XLR Female connectors (Balanced/Unbalanced)
	Output Channels	1 x XLR Male connector (Balanced/Unbalanced)
	Frequency Response	10 Hz~20 kHz (± 0.5 dB)
	Total Harmonic Distortion + Noise (THD+N)	< 0.03% (1 kHz, 0 dBu)
	Signal to Noise Ratio (SNR)	> 100 dB (A-weighted)
	Dynamic Range	> 110 dB
	Maximum Input Level	+26 dBu (Balanced); +20 dBu (Unbalanced)
	Maximum Output Level	+26 dBu (Balanced)

	Crosstalk	1:1 professional-grade transformer
Isolation and Noise Suppression	Isolation Type	> 1 kV (input/output)
	Isolation Voltage	> 50 dB (50/60 Hz)
	Ground Loop Noise Rejection	Built-in filter circuit (>40 dB attenuation)
	EMI/RFI Shielding	≥ 100 m (balanced output, no attenuation)
	Maximum Transmission Distance	3 x XLR female connectors (balanced); optional 3.5mm adapter and 3 x 1/4" TRS (balanced/unbalanced);
Interfaces and Connections	Input Connector Standard:	1 x XLR male connector (balanced); 1 x 1/4 " TS (unbalanced); optional RCA 1 x 1/4" TS (unbalanced)
	Output Connector Standard:	Input: 600Ω (balanced) / 600Ω (unbalanced); Output: 600 Ω (balanced)
	Digital Interface	None (pure analog design)
	Impedance (Input/Output)	70 mm x 36 mm x 100 mm
Physical and Environmental	Dimensions (L x W x H)	0.45 kg
	Weight	3 x XLR female connectors (balanced/unbalanced)
	Enclosure Material	Metal housing, blue painted
	Operating Temperature	0°C~50°C
	Storage Temperature	-20°C~70°C
	Humidity	5%~95% (non-condensing)

Power and Safety	Power Input	No adapter required, No power supply required
	Power Consumption	< 2 W (typical, all inputs active)

Warranty Regulations

The warranty period of this product is 1 year.

In the warranty period of non-man-made damage caused by the product performance failure can enjoy three packages of service.

Warranty card by the sales unit stamped after the effective. The alteration is invalid!

The following conditions (including, but not limited to, this) are not covered by the three-package service:

1. No warranty card or missing valid invoice or the date has exceeded the validity period of the three packages of services;
2. Not in accordance with the requirements of the product instructions for use, maintenance, management and damage caused;
3. The product model or code on the warranty voucher does not match the physical goods;
4. Damage caused by the dismantling and repair of non-authorized service providers;
5. Normal discoloration, wear and tear and consumption during the use of the product are not covered by the warranty;
6. The product cannot be used due to the user's own network reasons, please consult customer service staff.