AS162
User Guide

Analog Summing Unit



Important safety instructions

Before using your AS162, be sure to carefully read the applicable items of these operating instructions and the safety suggestions.

1. Read all product instructions.
2. Keep printed instructions, do not throw away.
3. Follow all instructions.
4. Do not use this unit near water, in unprotected outdoor areas or in rain or wet conditions.
5. Clean only with dry cloth.
6. Do not install near any heat sources.
7. Do not defeat the safety purpose of the grounding type plug. A grounding type plug has two blades and a third grounding connector. The third connector is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
8. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the AS162.
9. The AC mains plug or appliance coupler shall remain readily accessible for operation.
10. The unit is intended for use in a 19" rack. Follow the mounting instructions.
11. Unplug AS162 during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified service personnel. Servicing is required when the AS162 has been damaged in any way, such as when the power-supply cord or plug has been damaged; liquid has been spilled or objects have fallen into the AS162; rain or moisture has entered the AS162; the AS162 has been dropped; or when for undetermined reasons the AS162 does not operate normally.
13. Do not remove the covers. Removal of the cover will expose hazardous voltages. There are no user-serviceable parts inside, and removal may void the warranty.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER.
NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING: To prevent fire or electric shock, do not expose this equipment to rain or moisture.

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AS162

ANALOG SUMMING UNIT

AS162 – part number KVV 987 561 (230 V)
KVV 987 562 (115 V)



Introduction

The AS162 is a premium stereo 16-channel analog summing unit designed to overcome the resolution limitations inherent in complex digital mixing applications. As digital consoles combine a large number of channels internally, overall audio resolution and detail are often compromised. By routing stereo submixes (such as drums, instruments, choirs, and lead vocals) out of the digital desk and summing them in the analog domain, the AS162 increases the definition, instrument separation, and overall transparency of the final mix.

Application

Designed to enhance audio resolution and transparency by summing multiple channels in the analog domain, improving clarity and depth in complex mixes

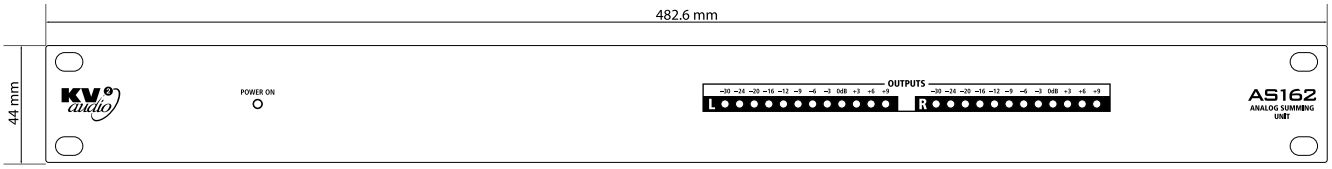
- Live music mixing and touring applications
- Studio recording and hybrid analog/digital workflows
- Broadcast and production environments
- Fixed installations requiring high channel-count summing
- Can be integrated with any professional audio system for improved sonic performance

The compact 1U device features stereo 16 balanced inputs utilizing four standard DB25 connectors (TASCAM pinout), and two pairs of balanced stereo outputs equipped with high quality transformer-isolated XLR connections to ensure maximum signal purity and prevent ground loops. The front panel is equipped with a Power ON indicator and dual left/right LED meters scaling from -30 dB to +9 dB for accurate level monitoring.

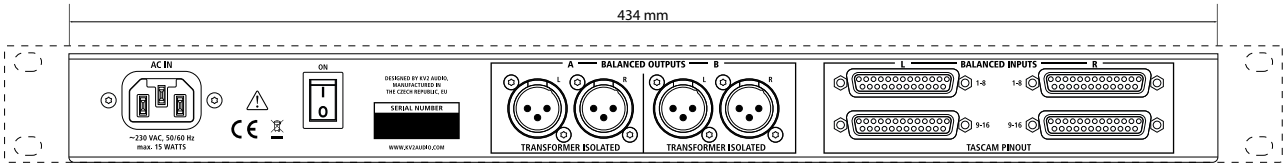
To achieve the ultimate sonic character, the AS162 can be paired seamlessly with the Compex for harmonic enhancement or QD8 modules as a selectable master EQ. Great emphasis was placed on maintaining the highest possible sound quality, making it the ultimate choice for engineers seeking uncompromised dynamic range in live sound reproduction.

Dimensions

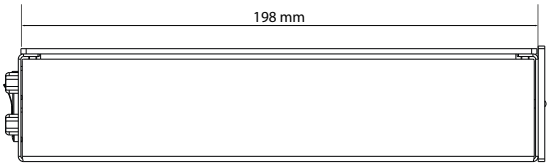
Front Panel:



Rear Panel:



Side Panel:



Unpacking

Unpack the AS162 and check to see if there is any damage to it. If you find any damage notify your supplier immediately. Only the consignee may institute a claim with the carrier for any damage incurred during shipping. Be sure to save the carton and all packaging materials for the carrier's inspection.

Should you ever need to ship the unit, only use the original factory packaging. If the shipping carton is unavailable, contact your supplier to obtain a replacement.

The AS162 carton should contain:

- AS162 Analog Summing Unit
- User's Guide
- IEC Power Cable

Rack mounting

The AS162 will mount in a standard 19" rack system. Use four screws and washers to mount the AS162 to the rack rails. We recommend using a shock-mounted rack for touring use to prolong the life of your AS162.

AC Power requirements

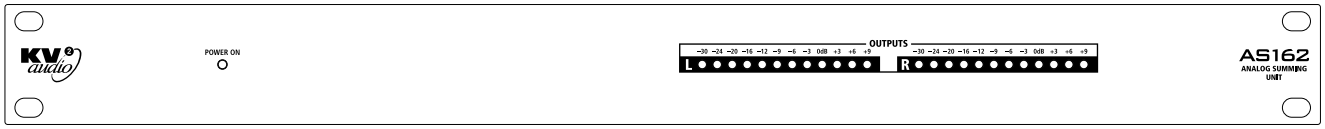
The AS162 uses a standard IEC 3-pole AC connector. The device must be connected to a mains socket outlet with protective earthing connection. The AS162 operates in either 115 V or 230 V mode. This setup is preconfigured at the factory. The mains plug of the power supply cord shall remain readily operable.

Voltage requirements

The AS162 operates safely and without audio discontinuity if the AC voltage stays within the operating window of 90 V-130 V in 115 V mode or 180 V–260 V when working in 230 V mode at 50/60 Hz.

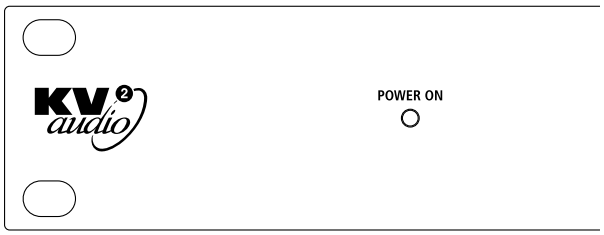
CAUTION: IF THE ON LED DOES NOT ILLUMINATE OR THE SYSTEM DOES NOT RESPOND TO AUDIO INPUT REMOVE AC POWER. VERIFY THAT THE VOLTAGE IS WITHIN THE PROPER RANGE. IF THE PROBLEM PERSISTS, PLEASE CONTACT KV2 AUDIO OR AN AUTHORIZED SERVICE CENTER.

Front Panel



Power ON

Green LED, indicates whether the AS162 is powered on.



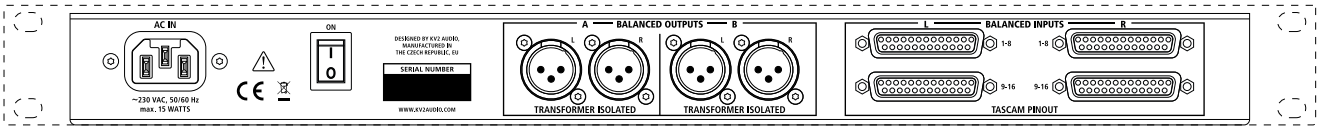
OUTPUT LEVEL METERS

12 segment, 3 color peak reading meter for L and R output.



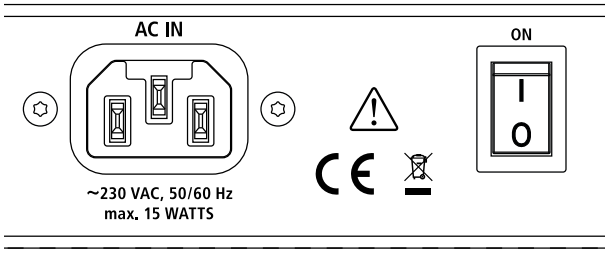
Serves to monitor balanced outputs signal presence and levels. The meters are connected to the input of the output transformers.

Rear Panel



Plug power connector

For connection to a standard IEC 3-pole AC connector. Before connecting make sure that the mains voltage corresponds to the AS162's voltage requirements as stated on the unit.

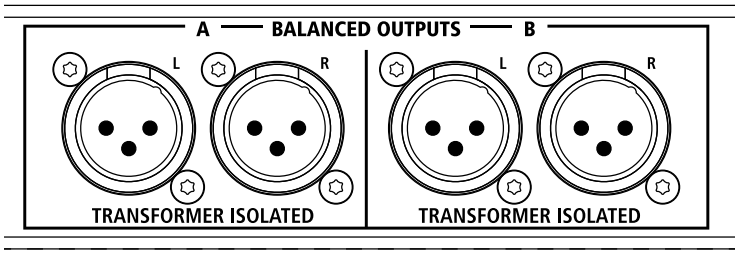


AC power Switch

Used to turn the AS162 on or off.

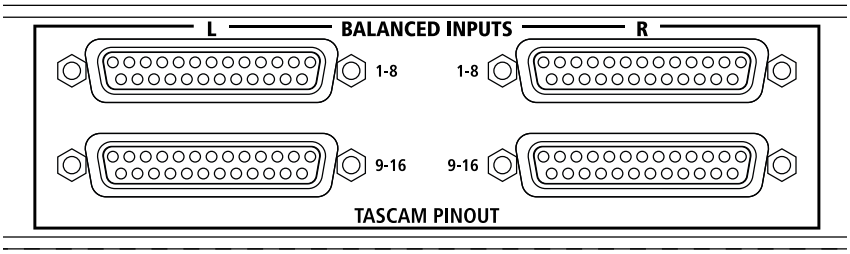
BALANCED OUTPUTS

Balanced Male XLR connectors (pin 2 = hot) for sending Left and Right audio signal. Outputs A and B are independently galvanically isolated.



Balanced Inputs

2 × 2 DB25 (D-sub 25)
Serves as a 16 channel L and 16 channel R inputs.
Uses the TASCAM pinout.
Please refer to Input Cables and Output Cables section



Using the System

The AS162 is designed for high-quality analog signal mixing, delivering superior sound quality compared to digital mixing.

To fully benefit from the AS162's capabilities, route as many individual channels as possible from the digital mixing console to the AS162 and perform the mixing there. The only practical limitation is the number of available outputs on the mixing console.

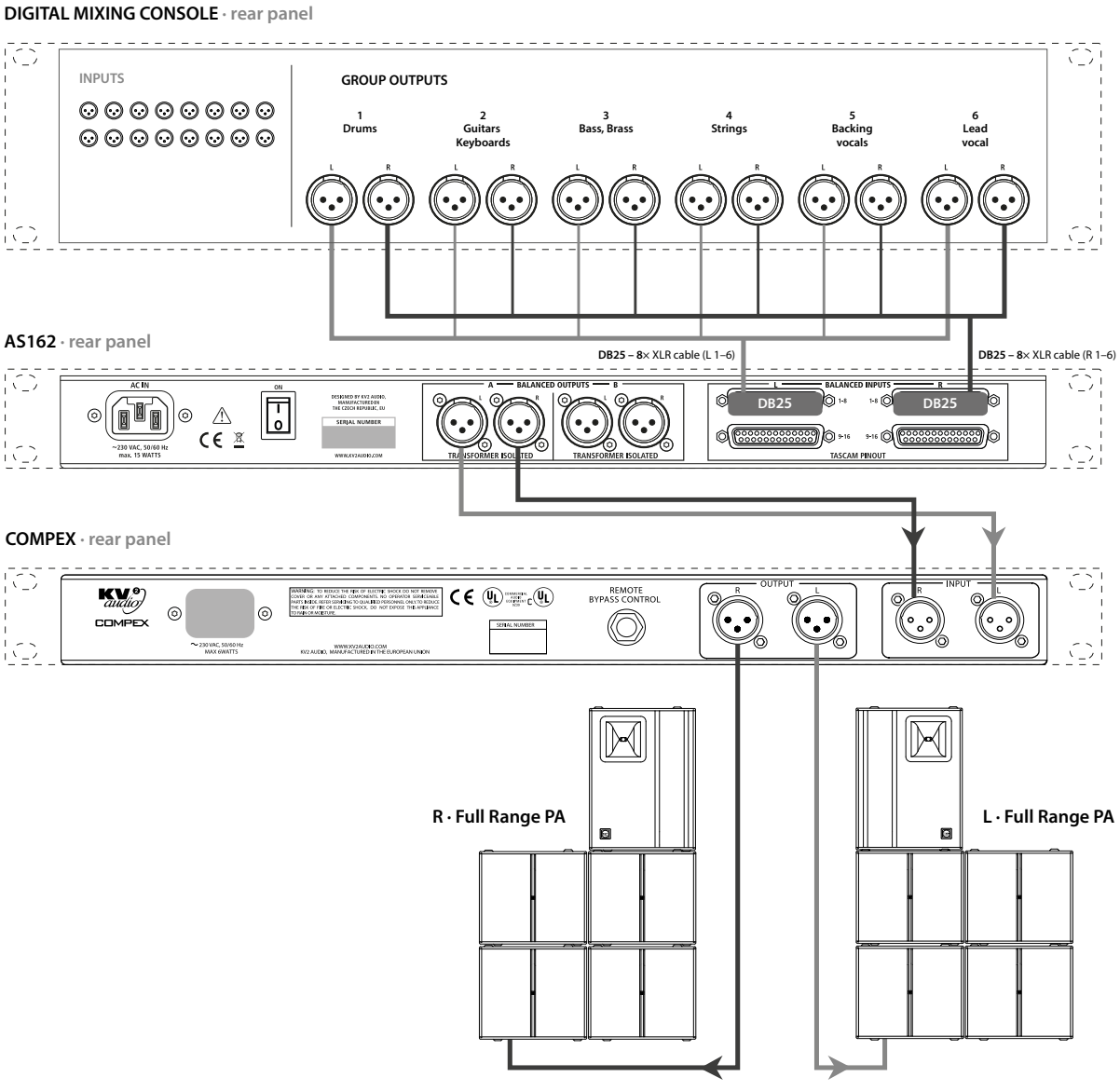
Application Example 1

Channels are partially mixed into groups within the mixing console, and the GROUP outputs are routed to the AS162 as stereo pairs. The AS162 does not need to be fully populated – it is perfectly suitable even when only a few console outputs are available. This example uses six stereo groups.

An example of grouping arrangement is:

1. Drums
2. Guitars and keyboards
3. Bass, Brass
4. Strings
5. Backing vocals
6. Lead vocal

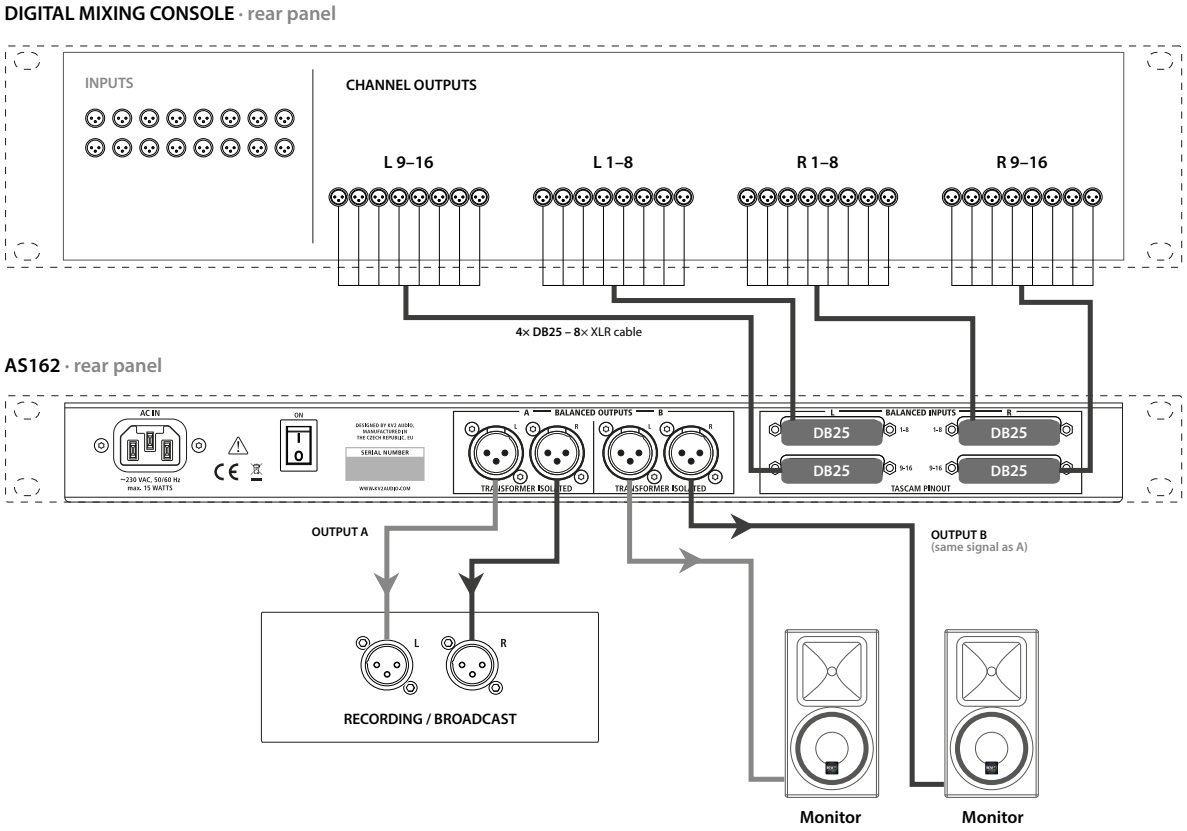
In this example, output A feeds the KV2 Compex for harmonic enhancement before the signal reaches the PA system.



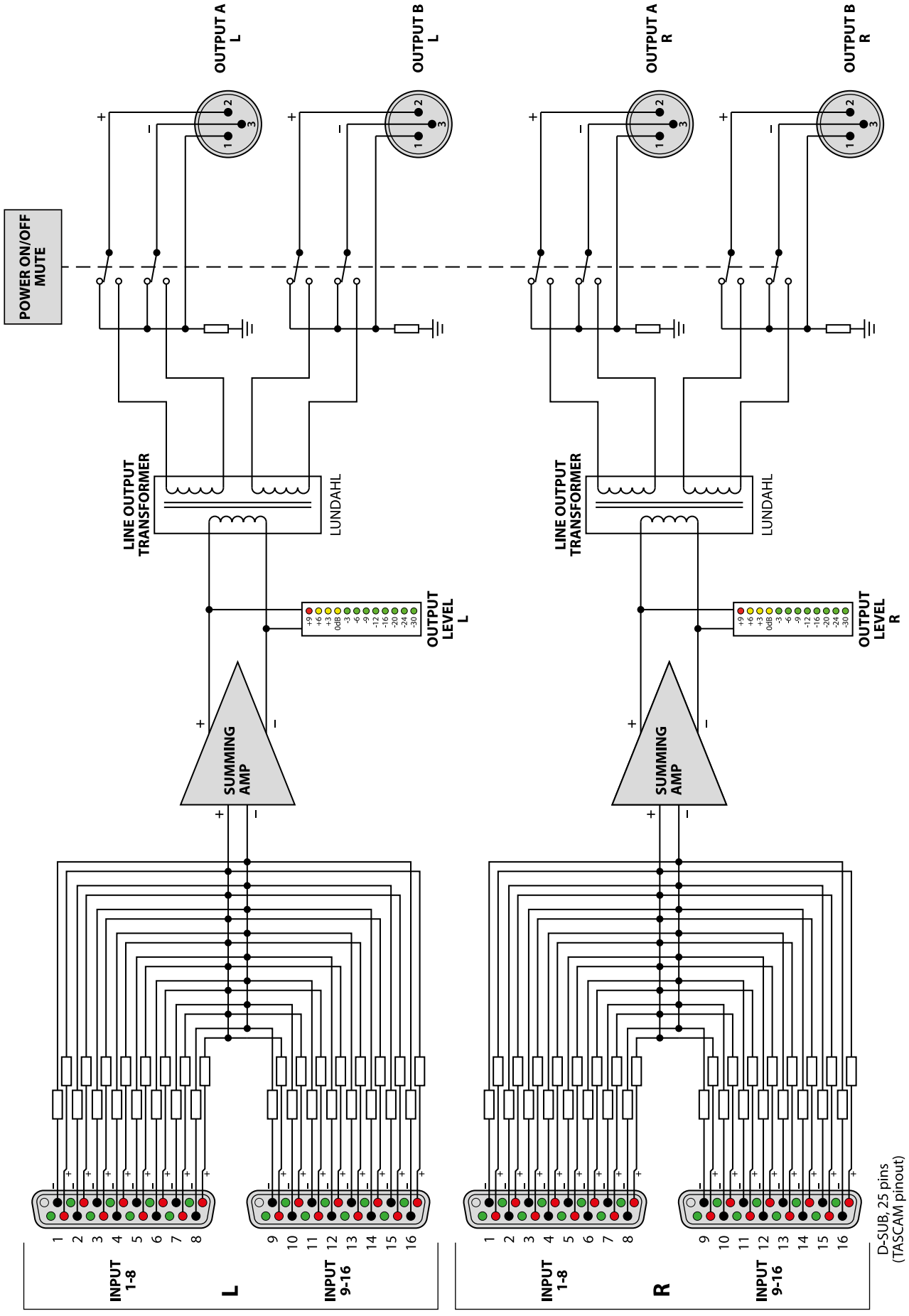
Application Example 2

All channels from the mixing console are routed directly to the AS162.
Each channel is sent to the AS162 as a stereo pair (L and R), so up to 16 stereo channels can be summed.

Output B carries the same signal as output A and can be used, for example, for monitoring or broadcast when recording.



Block Diagram

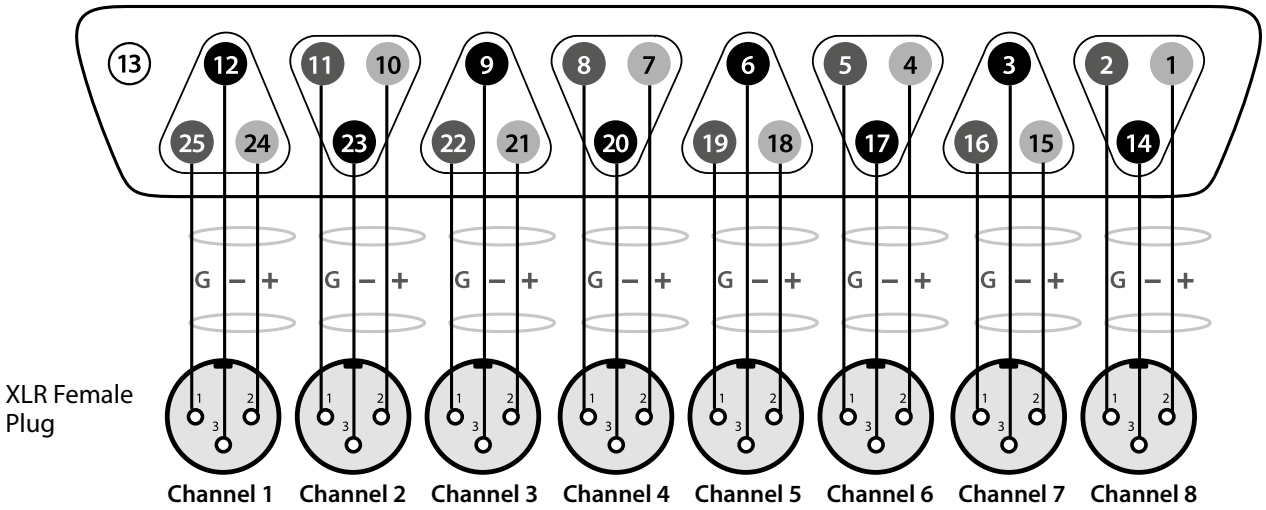


Input Cables and Output Cables

AS162 Input Cables

DB25 – 8× XLR

REAR VIEW OF MALE DB-25 CONNECTOR

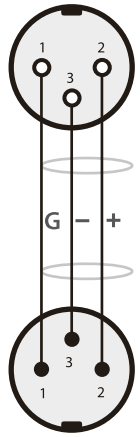


AS162 Output Cables

XLR - XLR

Pin 2 - Pin 2 (Hot)
Pin 3 - Pin 3 (Cold)
Pin 1 - Pin 1 (Shield)

from AS162 Output
XLR Female Plug

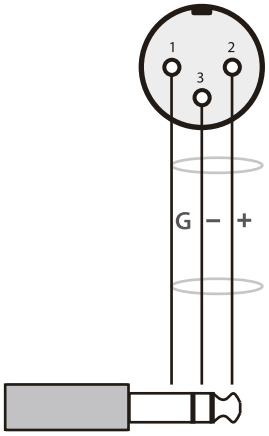


XLR Male Plug

XLR - Jack (balanced)

Pin 2 - Tip (Hot)
Pin 3 - Ring (Cold)
Pin 1 - Sleeve (Shield)

from AS162 Output
XLR Female Plug

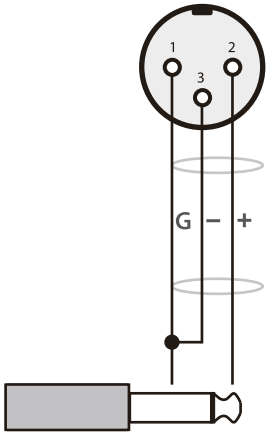


TRS (Stereo) Jack

XLR - Jack (unbalanced)

Pin 2 - Tip (Signal)
Pin 3 - Sleeve (Shield)
Pin 1 - Sleeve (Shield)

from AS162 Output
XLR Female Plug



TRS (Stereo) Jack

XLR Plugs seen from solder side

Specifications

Audio Performance	
-1 dB Response	20 Hz to 100 kHz
Dynamic Range	>140 dB
Channel Crosstalk	>120 dB
Total Harmonic Distortion	<0.001%
Output Channels	
Max. Output Voltage	20 dBu
Max. Output Current	120 mA
Signal Input	
Input Channels	2× 16 (DB25)
Input Impedance	4.4 kΩ (balanced)
Line input	4× DB-25 Tascam pinout
Signal Output	
Signal Output Channels	2× 2 XLR
Output Impedance	50 Ω transformer balanced
Features	
Indicators	LED, 12 segment peak meter
Power Requirements	
Power Connector	IEC 320
Operating Voltage	115 V / 230 V
Operating Voltage Range	90 to 130 V | 180 to 260 V @ 50/60 Hz
Physical Dimensions	
Height	43.8 mm (1.72")
Width	482.6 mm (19.0")
Depth	248 mm (9.76")
Weight	3 kg (6.6 lb)

Warranty

Your AS162 is covered against defects in material and workmanship.

Refer to your supplier for more details.

Service

In the unlikely event that your AS162 develops a problem, it must be returned to an authorized distributor, service centre or shipped directly to our factory. Because of the complexity of the design and the risk of electrical shock, all repairs must be attempted only by qualified technical personnel.

If the unit needs to be shipped back to the factory, it must be sent in its original carton. If improperly packed, the unit may be damaged.

To obtain service, contact your nearest KV2 Audio Service Centre, Distributor or Dealer.



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Made Perfectly Clear.

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