



JK DI-Boxes

User Guide

- JK1 - Active DI BOX • JK2 - Stereo DI BOX
- JKA - Acoustic DI BOX • JKP - Passive DI BOX
- JKT - Tone Generator



The Future of Sound.
Made Perfectly Clear.

At KV2 Audio our vision is to constantly develop technologies that eliminate distortion and loss of information providing a true dynamic representation of the source.

Our aim is to create audio products that absorb you, place you within the performance and deliver a listening experience beyond expectations.

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Named after company founder and chief engineer, George 'Jiri' Krampera, the JK Series of DI Boxes and Audio Tools retain KV2's philosophy of the best possible signal path from source to speaker. The JK Series consists of the JK1 Single Channel DI, JK2 Stereo DI, JKA Single Channel Acoustic DI with Resonance Notch Filter and the JKP Single Channel Passive DI and Mic Splitter. Also included in the range is the JKT Tone Generator, a useful solution-provider audio tool that will assist every engineer in the tuning and checking of systems and components.

KV2's JK series represents the pinnacle in DI technology, by offering a higher headroom and lower output impedance, than any other DI on the market. This simply means the JK Series can deliver crystal clear, distortion free audio from the hottest sources, without a hint of signal degradation over greater distance. KV2 has optimized the use of phantom power with a special switching power supply on the JK Series, to enable an impressive 20 volts of peak power on the internal rails. This allows the JK Series to deliver 50 Ohms on the XLR output giving true line driver capability delivering greater audio integrity and the ability to send high quality signal four times the distance of it's nearest competitor.

All JK Series DI boxes are hand built in the Czech Republic utilizing high quality components and transformers. Full transformer balancing ensures the highest possible signal integrity without interference from RF or ground loops. The heavy-duty steel enclosure provides maximum protection for the electronics and further shielding against external interference. KV2 stands by the build quality of these units with a full 5-year warranty.

JK1 - Active DI BOX - Line Driver

The JK1 features two 1/4" jack inputs with mix or parallel function with a variable low cut filter and 15dB pad. Phase Shift and Ground Lift switches are also available. The JK1 is ideal for connection of single keyboards, guitars or instrument amplifier output conditioning or combining two inputs via the mix function.

JK2 - Stereo DI BOX - Line Driver

The JK2 features two 1/4" jack inputs with parallel monitor outputs as well as RCA inputs. The JK2 has two completely separate channels and can be used with two different instruments or stereo instruments. The JK2 features a variable Pad, Phase Shift and ground lift.

JKA - Acoustic DI BOX - Line Driver

The JKA is a dedicated DI for acoustic instruments. The JKA features a high-impedance 1/4" jack input capable of receiving signal from all types of pick-ups. A +10dB gain boost is available for low-level instruments. The JKA also features a tunable notch filter for eliminating the resonant frequency in an acoustic instrument, reducing feedback issues.

JKP - Passive DI BOX - Transformer Balanced

Serves as a universal passive DI box with low output impedance. The JKP features one XLR input and two 1/4" jack inputs in parallel. The JKP is dedicated for multiple instruments connection such as keyboards, guitars or instrument amplifiers output conditioning. The JKP also features phantom power supply transmission for condenser microphone connection and output signal conditioning.

JKT - Tone Generator

The JKT is the perfect tool for checking and tuning PA systems along with various pieces of equipment. Phantom powered it has two XLR Outputs and 1/4" Jack Out. The JKT delivers a full range of tones from 20Hz through to 30kHz, as well as both White Noise and Pink Noise.

JK1

JK1 - part number KVV 987 205



JK1 - Active DI BOX - Line Driver

The JK1 features two 1/4" jack inputs with mix or parallel function with a fixed low cut filter and 15dB pad. Phase Shift and Ground Lift switches are also available. The JK1 is ideal for connection of single keyboards, Guitars or instrument amplifier output conditioning or combining two inputs via the mix function.

1. Phantom Power Supply

For ease of use, maximum headroom and low noise the JK1 is powered by phantom power from the mixing console. A green LED indicates the presence of phantom power. Simply switch on phantom power on your console and you are good to go.

2. Multiple Inputs

The JK1 features two asymmetrical inputs with 1/4" jack connectors. These inputs can be set as a parallel (input is present on thru), mixed together (inputs placed into the input and thru are mixed together) or parallel with -15dB attenuation on input.

3. Low Cut Switch

Selects the high pass filter frequency point between 160 and 80Hz. Ideal for eliminating unwanted bass rumble from instruments.

4. Low Impedance Output

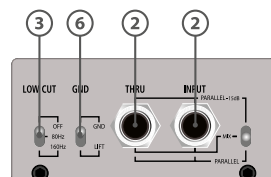
The main symmetrical LINE OUT output has an impedance of 50Ω and it is Intended for connection to a mixing desk. The output is separated galvanically from the input.

5. PHASE Switch Selector

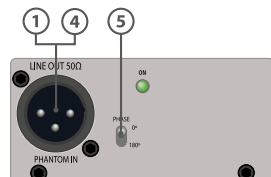
Selects between 0° and 180° for LINE OUT output. This switches the XLR pin-2 and pin-3 to interface with older equipment. Also can be used when the instrument is being reproduced by the DI and microphone to avoid cancellation.

6. GND Ground Switch Selector

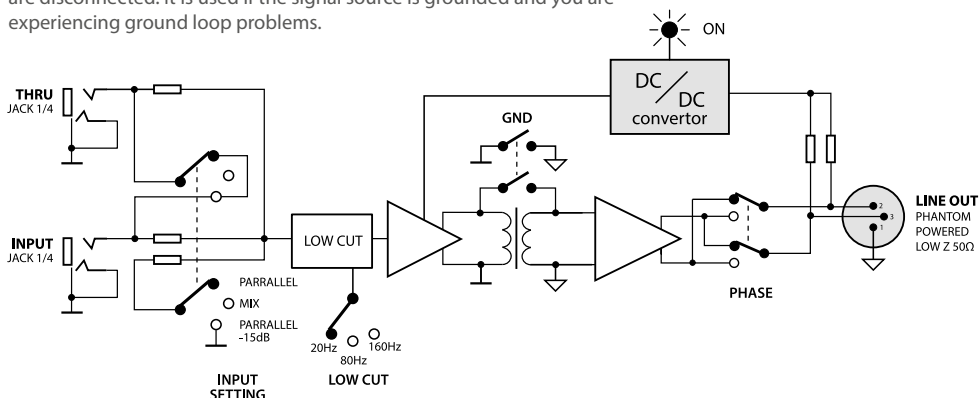
This ground-lift switch breaks the ground between the input & the output to eliminate hum and noise caused by ground loops. The GND position - the grounds for the input and output are interconnected ideal if the signal source is not grounded. The LIFT position - the grounds for the input and the output are disconnected. It is used if the signal source is grounded and you are experiencing ground loop problems.



JK1 - FRONT PANEL



JK1 - REAR PANEL



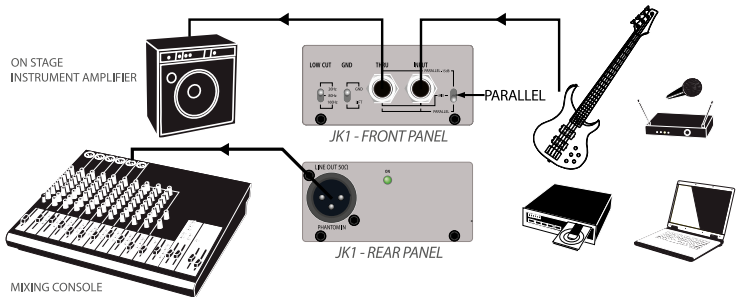
JK1 Block diagram

Specifications

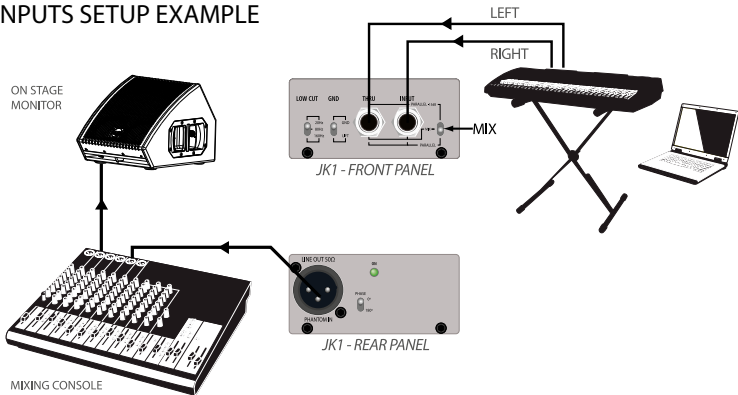
System Acoustic Performance	
-1dB Response	20Hz to 100kHz
Dynamic Range	>130dB
Total Harmonic Distortion	<0.002%
Signal Input	
Input Channels	2x 1/4" Jack
Input Impedance	1MΩ / 5kΩ
Max. Input voltage	5V / 20V peak
Signal Output	
Output Channels	XLR (line)
Output Impedance	50Ω

Features	
Gain	0 / -15dB
Phase	0° / 180°
High Pass Filter	OFF, 80, 160Hz
Indicators	Power-ON LED
Ground Mode	GND / Lift
Power	
Phantom Power	48 to 56V / 8mA
Cabinet	
Cabinet Material	Heavy duty metal
Physical Dimensions	
Height	40 mm (1.57")
Width	80 mm (3.15")
Depth	131 mm (5.16")
Weight	610 g (1.34lbs)

JK1 - PARALLEL INPUTS SETUP EXAMPLE



JK1 - MIX INPUTS SETUP EXAMPLE



JK2

JK2 - part number KVV 987 217



JK2 - Stereo DI BOX - Line Driver

The JK2 features two 1/4" jack inputs with parallel monitor outputs as well as RCA inputs. The JK2 has two completely separate channels and can be used with two different instruments, or stereo keyboards and other two channel sources such as laptops, computers and Ipad. The JK2 features a variable pad, Phase shift and Ground lift switch.

1. Phantom Power Supply

For ease of use, maximum headroom and low noise the JK2 is powered by phantom power from the mixing console. A green LED indicates the presence of phantom power. Simply switch on phantom power on your console and you are good to go. The JK2 can be powered to channel A, channel B or both outputs, which provides best results.

2. Multiple Inputs

Each channel features two paralleled inputs (A, B) each equipped with 1/4" jack connectors and stereo RCA inputs on the rear of the unit.

3. GAIN Switch

Using the GAIN switch selector the input sensitivity of the JK2 can be adapted at three levels: 0dB, -12dB, -24dB, so very high-level inputs can be suitably reduced for clear, distortion-free reproduction.

4. XLR 50ohm Outputs

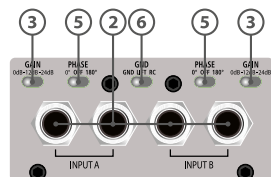
The JK2 includes two LINE OUT outputs with XLR connectors. Outputs work with an impedance of 50Ω and it is intended for connection to a mixing desk. The outputs are separated galvanically from the input.

5. PHASE Switch Selector

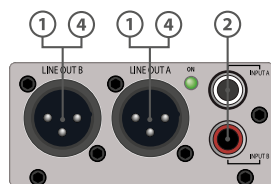
Selects between 0° and 180° for LINE OUT output. This switches the XLR pin-2 and pin-3 to interface with older equipment. Also can be used when the instrument is being reproduced by the DI and microphone to avoid cancellation.

6. GND Ground Switch Selector

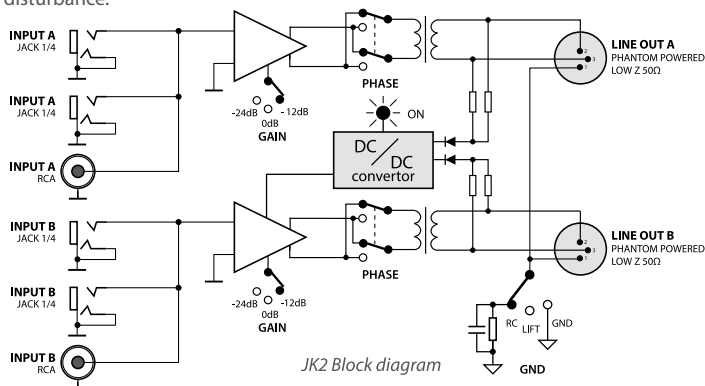
This ground-lift switch breaks the ground between the input & the output to eliminate hum and noise caused by ground loops. The GND position - the grounds for the input and output are interconnected ideal if the signal source is not grounded. The LIFT position - the grounds for the input and the output are disconnected. It is used if the signal source is grounded and you are experiencing ground loop problems. The RC position - the grounds for the input and the output are interconnected via a parallel RC combination. It is used to suppress static disturbance.



JK2 - FRONT PANEL



JK2 - REAR PANEL



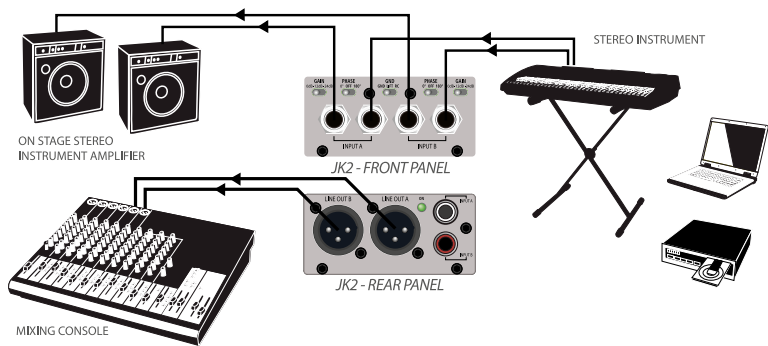
JK2 Block diagram

Specifications

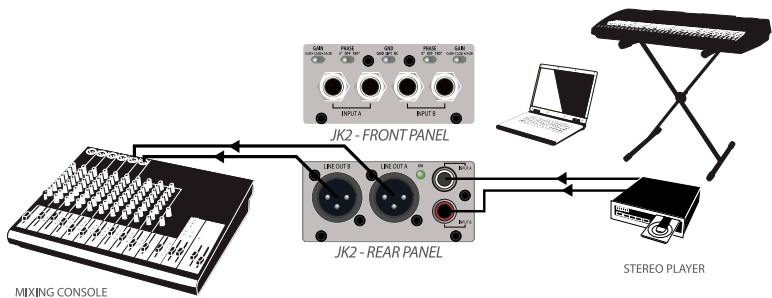
System Acoustic Performance	
-1 dB Response	10Hz to 40kHz
Dynamic Range	>130dB
Total Harmonic Distortion	<0.005%
Signal Input	
Input Channels	2x 1/4" Jack + 2x RCA
Input Impedance	2x 1MΩ / 10KΩ
Max. Input voltage	1V / 5V / 20V peak
Signal Output	
Output Channels	2x XLR, 2x 1/4" Jack THRU
Output Impedance	50Ω

Features	
Gain	0 / -12 / -24dB
Phase	0° / 180°
Indicators	Power-ON LED
Ground Mode	GND / Lift / RC
Power	
Phantom Power	48 to 56V / 8mA
Cabinet	
Cabinet Material	Heavy duty metal
Physical Dimensions	
Height	40 mm (1.57")
Width	80 mm (3.15")
Depth	131 mm (5.16")
Weight	630 g (1.39lbs)

JK2 - STEREO INSTRUMENT SETUP EXAMPLE



JK2 - STEREO PLAYER SETUP EXAMPLE



JKA



JKA - part number KVV 987 204

JKA - Acoustic DI BOX - Line Driver

The JKA is a dedicated DI for acoustic instruments. The JKA features a high-impedance 1/4" jack input capable of receiving signal from all types of pick-ups. A +10dB gain boost is available for low-level instruments. The JKA also features a tuneable notch filter for eliminating the resonant frequency in an acoustic instrument, reducing feedback issues.

1. Phantom Power Supply

For ease of use, maximum headroom and low noise the, JK1 is powered by phantom power from the mixing console. A green LED indicates the presence of phantom power. Simply switch on phantom power on your console and you are good to go.

2. High Impedance Input

The JKA includes one 1/4" high impedance jack input. It is adapted to connect the pick-up of acoustic instruments that require high load impedance (e.g. Piezo electric pick-ups). By using the GAIN selector switch, the amplification of the JKA can be increased by +10dB.

3. Line Out XLR Output

The main symmetrical LINE OUT output works with an impedance of 50Ω and it is intended for connection to a mixing desk. The output is not separated galvanically from the input because the JKA is intended for use with musical instruments (which are not grounded). Therefore in certain situations the JKA may need to be grounded elsewhere, in order to avoid a slight 50 or 60Hz hum occurring.

4. Monitor Out 1/4" Jack Output

The adjacent symmetrical MONITOR OUT 1/4" jack output has an impedance of 100Ω, the same level as the LINE OUT and it is galvanically isolated (for monitoring on stage using combos). This Monitor output is separated from the main output using a transformer. When using a mono jack the relevant input is switched automatically to the asymmetrical mode.

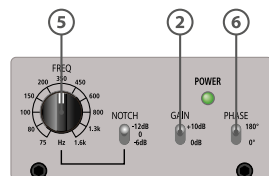
5. Tunable NOTCH Filter

To eliminate the dominant self-resonance, (feedback) of any acoustic instrument, the JKA is equipped with a phase switch selector and a tunable NOTCH filter with a switchable attenuation level of -6dB and -12dB. Recommended method of adjustment for the NOTCH filter:

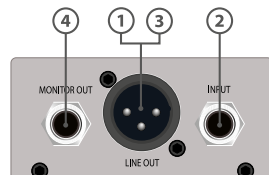
- Increase the amplification until the acoustic instrument feeds back
- Suppress the acoustic feedback at low frequencies using the PHASE switch
- Increase the amplification until the acoustic instrument feeds back again, put the NOTCH switch selector to the -6dB position and eliminate the feedback by use of the potentiometer. If the acoustic feedback continues to happen at the same frequency put the NOTCH switch selector in the -12dB position.

6. PHASE Switch Selector

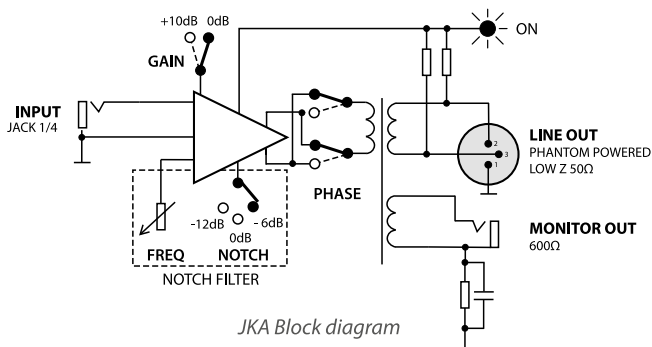
Selects between 0° and 180° for LINE OUT output. This switches the XLR pin-2 and pin-3 to interface with older equipment. Also can be used when the instrument is being reproduced by the DI and microphone to avoid cancellation.



JKA - FRONT PANEL



JKA - REAR PANEL

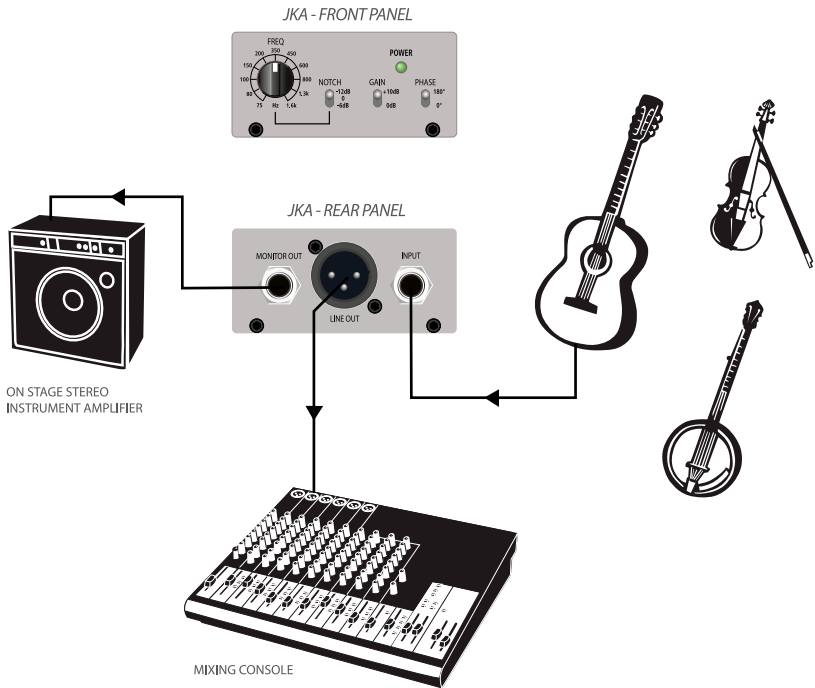


JKA Block diagram

Specifications

System Acoustic Performance		Features	
-1 dB Response	10Hz to 40kHz	Gain	0 / +10dB
Dynamic Range	>130dB	Phase	0° / 180°
Total Harmonic Distortion	<0.03%	Notch Filter	75Hz to 1650Hz (0, -6, -12dB)
Signal Input		Indicators	Power-ON LED
Input Channels	1x 1/4" Jack	Power	
Input Impedance	1MΩ	Phantom Power	48 to 56V / 8mA
Max. Input voltage	2,5V / 7V peak	Cabinet	
Signal Output		Cabinet Material	Heavy duty metal
Output Channels	XLR (line) + 1/4" Jack (monitor)	Physical Dimensions	
Output Impedance	50Ω line / 600Ω monitor	Height	40 mm (1.57")
		Width	80 mm (3.15")
		Depth	131 mm (5.16")
		Weight	600 g (1.32lbs)

JKA - ACOUSTIC INSTRUMENT SETUP EXAMPLE



JKP

JKP - part number KVV 987 201



JKP - Passive DI BOX - Transformer Balanced

The JKP serves as a universal passive DI box with low output impedance. The JKP features one XLR input and two 1/4" jack inputs in parallel. The JKP is designed for multiple instrument connection such as keyboards, guitars or instrument amplifiers direct output. The JKP also features phantom power supply pass-through for condenser microphone connection and output signal Line Driving.

1. Phantom Power Through

The JKP DOES NOT REQUIRE PHANTOM POWER TO OPERATE. When using a condenser microphone that requires a phantom power from the mixing desk, turn the PHANTOM THROUGH switch selector to the ON position and the RATIO switch selector to the 1:4 position, (so that both switch selectors are in the top position). In position 1:2, no phantom power will be passed through the unit to the microphone.

2. Monitor and Line Outputs

The symmetrical LINE OUT output works with an impedance of 100Ω and with a ratio of 1:2 or 1:4. The adjacent MONITOR OUT output has an output impedance of 600Ω and a level 6dB higher than the LINE OUT output. The ratio of the monitor output is half that of the line output. (1:2 LINE = 1:1 MONITOR OUTPUT)

3. XLR and Jack Inputs

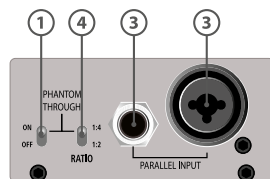
The JKP features two inputs with the XLR and 1/4" jack connector connected in parallel. Both outputs are connected symmetrically. When using a mono jack, the relevant input is switched automatically into the asymmetrical mode. To split a microphone signal to different sources simply plug it into the XLR input. The JKP has the ability to send high quality microphone signal long distances (Up to 300 m).

4. RATIO Switch Selector 1:2 / 1:4

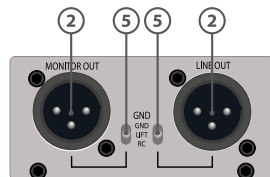
This is intended for changing the voltage and impedance ratio. For example, a condenser microphone's impedance can be decreased 16 times (1:4 position) which will improve the sound quality and capability of the microphone to drive long cables. The 1:2 position can also be used to improve the sound quality on dynamic microphones. Both inputs can be disconnected from the ground. The 1:4 ratio is for use with high impedance sources and the 1:2 ratio is for lower impedance sources.

5. GND Ground Switch Selectors

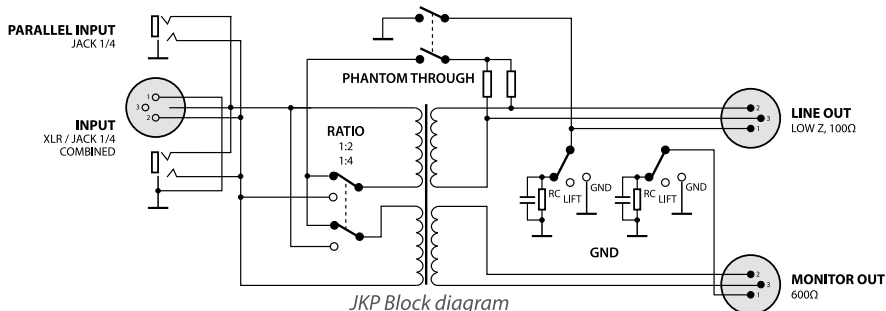
This ground-lift switch breaks the ground between the input & the output to eliminate hum and noise caused by ground loops. The GND position - the grounds for the input and output are interconnected. It is used if the signal source is not grounded. The LIFT position - the grounds for the input and the output are disconnected. It is used if the signal source is grounded. Interruption of the ground loop. The RC position - the grounds for the input and the output are interconnected via a parallel RC combination. It is used to suppress static disturbance.



JKP - FRONT PANEL



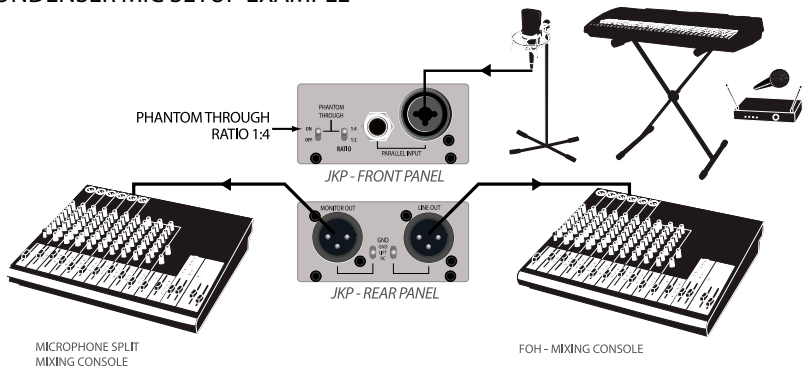
JKP - REAR PANEL



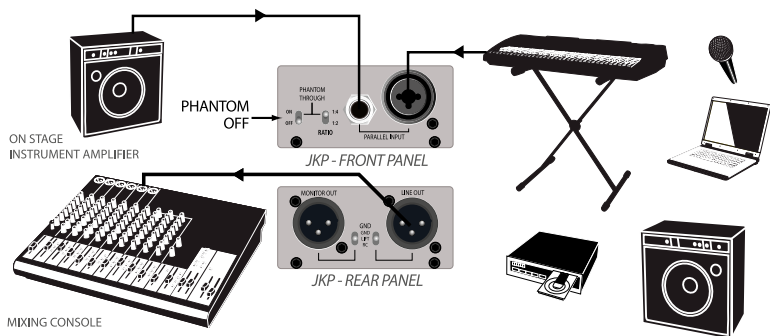
Specifications

System Acoustic Performance		Features	
-1dB Response	20Hz to 30kHz	Gain	1:2 / 1:4
Total Harmonic Distortion	<0.0005%	Ground Mode	GND / Lift / RC
Signal Input		Power	
Input Channels	1/4" Jack, XLR / 1/4" Jack	Phantom Power	Phantom through
Signal Output		Cabinet	
Output Channels	XLR (line) + XLR (monitor)	Cabinet Material	Heavy duty metal
Output Impedance	100Ω line / 600Ω monitor	Physical Dimensions	
		Height	40 mm (1.57")
		Width	80 mm (3.15")
		Depth	131 mm (5.16")
		Weight	590 g (1.3lbs)

JKP - CONDENSER MIC SETUP EXAMPLE



JKP - PARALLEL INPUTS SETUP EXAMPLE



JKT

JKT - part number KVV 987 272



JKT - Tone Generator

The JKT is the perfect tool for checking and tuning PA systems along with various pieces of equipment. Phantom powered, it has one combined input/output XLR and one combined XLR and 1/4" jack output. The JKT delivers a full range of tones from 20Hz through to 30KHz, as well as both White and Pink Noise.

1. Phantom Power Supply

For ease of use, the JKT is powered by phantom power from the mixing console. Phantom power supply presence is indicated by a single green LED.

2. Multiple Outputs

The symmetrical LINE OUT output works with an impedance of 50Ω, and is intended to be connected to a mixing console or any phantom power source device. The adjacent MONITOR OUT output has an output impedance of 600Ω and paralleled 1/4" jack connector output.

3. Generator Selector

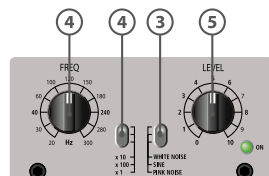
The JKT features a sine wave, tone generator with a frequency range from 20Hz to 30kHz, pink and white noise generator.

4. Frequency Selector

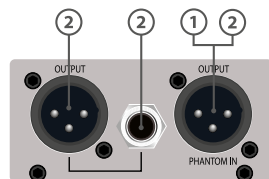
Sets the frequency range of the continuous frequency selector of the sine wave generator in ranges (20Hz to 300Hz), (200Hz to 3kHz) and (2kHz to 30kHz).

5. Output Level

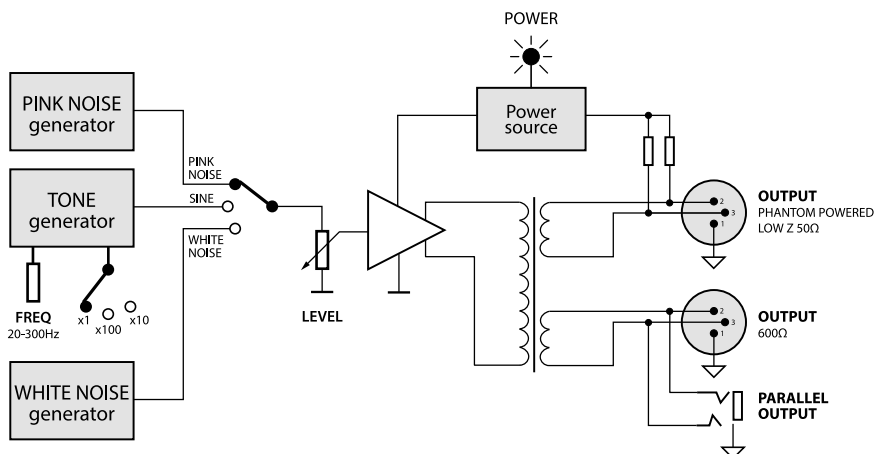
Sets the output level of selectable generators.



JKT - FRONT PANEL



JKT - REAR PANEL

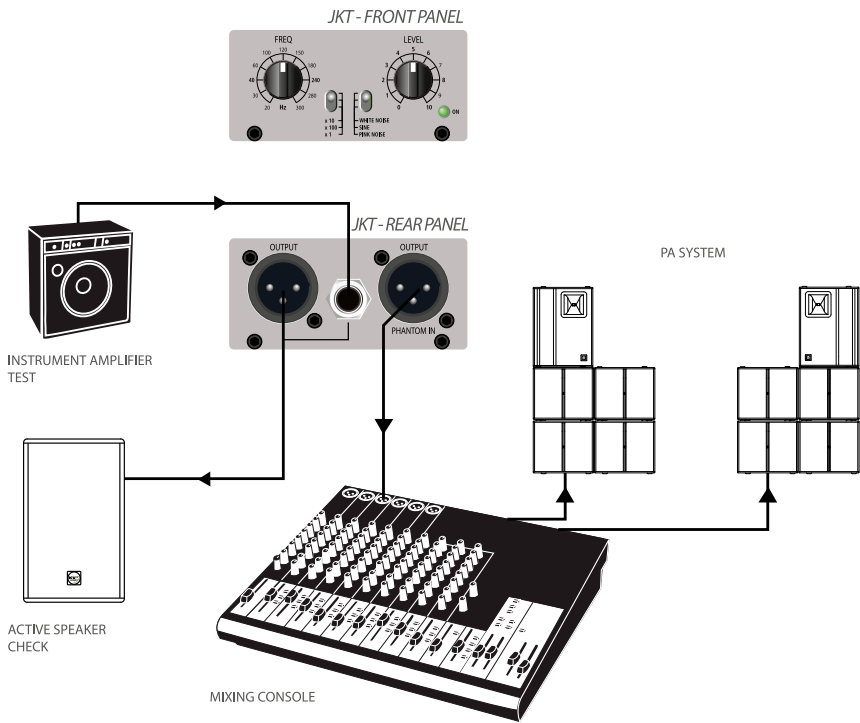


JKT Block diagram

Specifications

Signal Output		Power	
Output Channels	Jack 1/4", 2x XLR	Phantom Power	48 to 56V / 8mA
Output Impedance	50Ω line / 600Ω monitor		
Features		Cabinet	
Level Control	-∞ to 0dB	Cabinet Material	Heavy duty metal
Indicators	Power-ON LED		
Tone generator	20Hz to 30kHz	Physical Dimensions	
White noise generator	YES	Height	40 mm (1.57")
Pink noise generator	YES	Width	80 mm (3.15")
		Depth	131 mm (5.16")
		Weight	630 g (1.39lbs)

JKT - TONE GENERATOR, PA TUNING & EQUIPMENT TESTING



Warranty

Your JK DI BOX is covered against defects in material and workmanship.

Refer to your supplier for more details.

Service

In the unlikely event that your JK DI BOX 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 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.



The Future of Sound.
Made Perfectly Clear.

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