

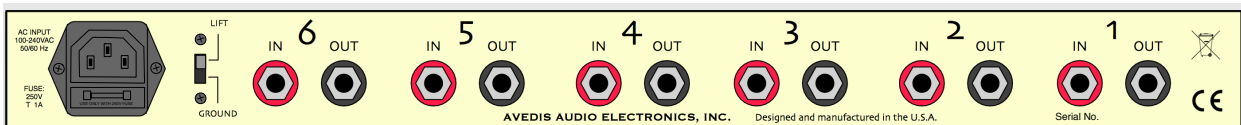
KeyPre®

KP6 - Electronic Instrument Preamplifier



AVEDIS AUDIO® E L E C T R O N I C S

USER'S GUIDE



avedisaudio.com

KeyPre®
KP6 - Electronic Instrument Preamplifier

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IMPORTANT SAFETY INSTRUCTION – READ FIRST



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



This symbol, wherever it appears, alerts to important operating and maintenance instructions in the accompanying literature. Read manual.

Read Instruction: Retain these 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.

Power sources: Connect the unit to mains power only of the type described in this user guide or marked on the rear panel. For safety, the power source must provide a good ground connection.

Power cord: Use the power cord with sealed mains plug appropriate for your local main supply as provided with the equipment. Route the power cord so that it is not likely to be walked on, stretched or pinched.

Non-Use Period: The power cord should be unplugged from the AC outlet when left unused for a long period of time.

Grounding: Do not defeat the grounding and polarization means of the power cord plug. Do not remove or tamper with the ground connection on the power cord.

Ventilation: Do not obstruct the ventilation slots or position the unit where the air required for ventilation is impeded. If the unit is to be operated in a rack, case or other furniture ensure that it is constructed to allow adequate ventilation.

Moisture: To reduce the risk of fire or electrical shock do not expose the unit to rain, moisture or use in damp or wet conditions. Do not place container of liquid on it, which may spill into any openings.

Heat: Do not locate the unit in a place close to excessive heat or direct sunlight, as this could be a fire hazard. Locate the unit away from any equipment, which produces heat such as: power supplies, power amplifiers and heaters.

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: To prevent damage to the controls and cosmetics avoid rough handling and excessive vibration. 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: Switch off the equipment and unplug the power cord immediately if it is exposed to moisture, spilled liquid, objects fallen into opening, the power cord or plug becomes damaged during a lightning storm or if smoke odor or noise is noted. The user should not attempt to service or modify the unit unless qualified to do so and under the guidance of Avedis Audio service personnel.

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

INTRODUCTION:

The KeyPre® was designed for professional keyboard, synthesizer, and drum machine users who want the highest performance when recording their electronic instruments. The wide range of different output levels, frequency response, and impedances from electronic instruments makes it especially challenging for preamplifiers. Over two years have been dedicated to research, test, and development in designing the KeyPre® and we are confident it will improve your sound for both recording and live applications.

INSTALLATION:

It is recommended that the KeyPre® be located away from any strong electromagnetic sources when racked. These sources can include power supplies, AC distributors and power conditioners, digital clocks, power amplifiers, and other units that may throw off a field above or below your rack mount equipment.

AC CORD:

The AC cord supplied with the KeyPre® is no ordinary cable. If you look closely, you will read that it is SHIELDED. This means that the safety ground conductor covers the live and neutral conductors along with a drain wire

This helps minimize noise by containing the electromagnetic field from coupling into nearby enclosures, chassis, and cables, and should be the only AC cord to power up the KeyPre®.

AC POWER SWITCH:

This rocker switch turns the power on and off. Allow a minute or so to warm up the KeyPre's circuitry. The unit could also be switched off at the AC power source with a AC distribution unit.

Save electricity - turn the unit off when not in use.

INPUT:

The KeyPre® provides both front and rear inputs. To use the front input, push the button which turns the LED on to indicate the input for the front TRS.

This way, you could keep your most used or more permanently installed instruments connected to the rear, and smaller pieces and more infrequently used instruments would connect to the front, even leaving them in and only toggling the push button when needed.

Both front and rear inputs have a balanced TRS (tip/ring/sleeve) input, and designed so that it could work with both balanced and unbalanced TS (tip/sleeve) instruments. Commonly, balanced outputs could in the form of an TRS or XLR type connector, and unbalanced outputs could have either 1/4" or RCA type connector. The advantage of having a balanced output from your instrument is the immunity to interacting with nearby noise sources. This immunity to noise is especially better with the input stage of the KeyPre® because it makes use of the THAT Corp InGenius® input IC (integrated circuit), developed by Bill Whitlock, former president of Jensen Transformers, to have transformer-like performance. Balanced audio's ability to reject noise is measured by common-mode rejection ratio, or CMRR, and at the worst offending frequency of 60Hz, this rejection is a high 90 dB.

GAIN:

The gain control is a continuously variable starting at Mute up to 32 dB of gain.

Most electronic instruments have ample output and may not need much gain to get you up to recording level for best signal to noise, although some need more gain and 32 dB should be more than enough. You can start at the 0 dB mark, which keeps your level the same from, input to output, which is also known as unity gain. From here you can adjust your level to optimize it whether you are recording or using a live setup.

OUTPUT:

The outputs of the KeyPre® are transformer balanced using TRS connectors.

Because Jensen® transformers are used for balancing the output, we say this is a floating balanced output. This means that you can unbalance the output of the KeyPre without compromising level and headroom.

Usually the output becomes unbalanced if, for example, the KeyPre® was to connect directly to effect processors and outboard gear with an unbalanced input. To get the most of the balanced noise-cancellation affect, it is smart to only unbalance right at the input of the unbalanced gear by using cables that are balanced 1/4" TRS on one side and TS unbalanced on the other side with the Ring and the Sleeve connected only on the TS end.

PHASE:

The KeyPre® operates in true phase from the input to the output jack so that Tip is hot (+), Ring is cold (-). In an unbalanced TS connection, Tip would still remain hot, but Ring would connect to Sleeve and have a ground potential.

METER:

The 5-bar LED meter is connected to the output of the KeyPre® and starts to illuminate when audio reaches 0 dBu level and each bar is lit with each additional 3 dB ending with +12 dBu with the fifth bar.

Each channel meter has been individually calibrated at these default levels, and although we found this to be most optimal, it is possible to customize them to your liking by means of an internal trim pot.

Please contact us for technical support if you would like to change the default meter levels yourself. Be sure to always disconnect the AC power before opening up the KeyPre and follow good safety practices. If you don't feel confident doing it, we can adjust it for you at no extra charge.

INPUT IMPEDANCE:

In our research, we found that different electronic instruments have a wide range of output impedances, from as low as 200 ohms to as high as 5k ohms. To load the instrument properly, higher input impedance is needed but this should not be too low, such to "match" it, and should not be too high, as with DI boxes. We must think of the imperfect world of audio electronics - that ALL outputs of audio equipment don't have steady output impedance to its frequency response. This unsteadiness and tendency for the audio to weaken at some point (higher output impedance) at the extremes of its frequency response limit is what engineer types like to call a *reactive output*. If you couple a reactive output to a long cable, which will also have an inherent capacitance between the conductors, you will have a tuned filter circuit. The result is a roll off at some frequency either in the low frequencies, high frequencies, or both depending on the output stage of the electronics instrument.

The KeyPre's steady input impedance of 48k ohms means that it will provide a comfortable load for any electronics instrument output, even if it's as high as 5k ohms.

MAXIMUM INPUT LEVEL:

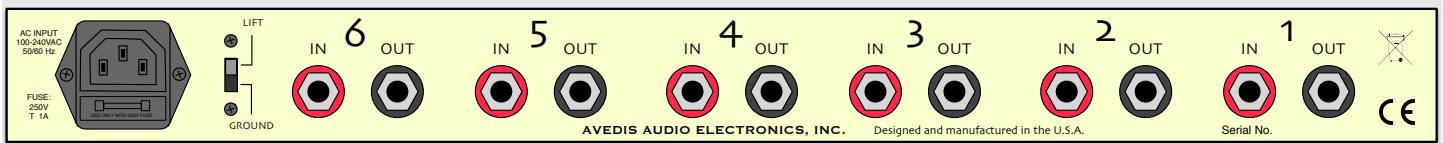
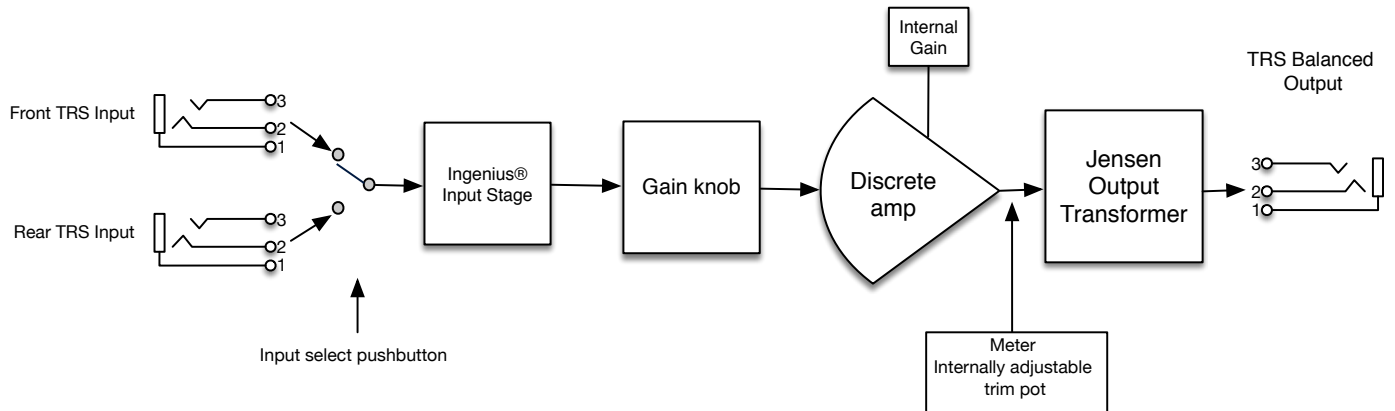
The maximum input level before clipping is +24dBu. This high headroom handling capability is important so that even the highest output from your DAW should not be able to make the input clip. The overall headroom in the output stage is even higher with +28dBu of level handling.

GROUNDING:

The KeyPre® is equipped with the Xsolate® patented ground lift system located as a switch at the rear of the unit. (Patent 9,054,463)

To reduce ground-induced noise, system safely isolates your ground connection at the outputs only, since the Jensen transformer provides a balanced floating output and no ground connection is needed.

KeyPre® Flowchart



Balanced systems only need a ground connection on one end only. This is called a telescope ground where only the Tip and Ring are used in audio transmission, and the ground connection on one end shields the cable.

Use the space above to note instruments on channels

Frequency Response	3Hz - 75kHz (-3dB)
Input Impedance	48k ohms
Maximum Input Level	+24dBu
Maximum Output Level	+28dBu
THD+N	0.015% @ 10dB Gain
CMRR	90 dB @ 60Hz
IMD	0.02% (400Hz, 4kHz)
Noise	-115dB (unfiltered, unweighted)
Dimensions	19"W x 1.75"H x 8"D
Weight	8 lbs (3.6kg)
Power requirements	100-240 VAC, 0.65A, 50/60Hz
Power consumption	18W

KeyPre™ Specifications

Avedis Audio maintains a policy of constant product improvement. Avedis Audio reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install same on products previously manufactured. Therefore, specifications are subject to change without notice.

WARRANTY INFORMATION

Limited Warranty

Avedis Audio Electronics will provide warranty and service for this unit in accordance with the following warrants:

Avedis Audio Electronics 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. Avedis Audio Electronics will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to factory service or authorized service center.

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.

Avedis Audio 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.

Avedis Audio 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.

For units purchased outside the United States, an authorized distributor of Avedis Audio will provide service.



AVEDIS AUDIO[®]

E L E C T R O N I C S

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