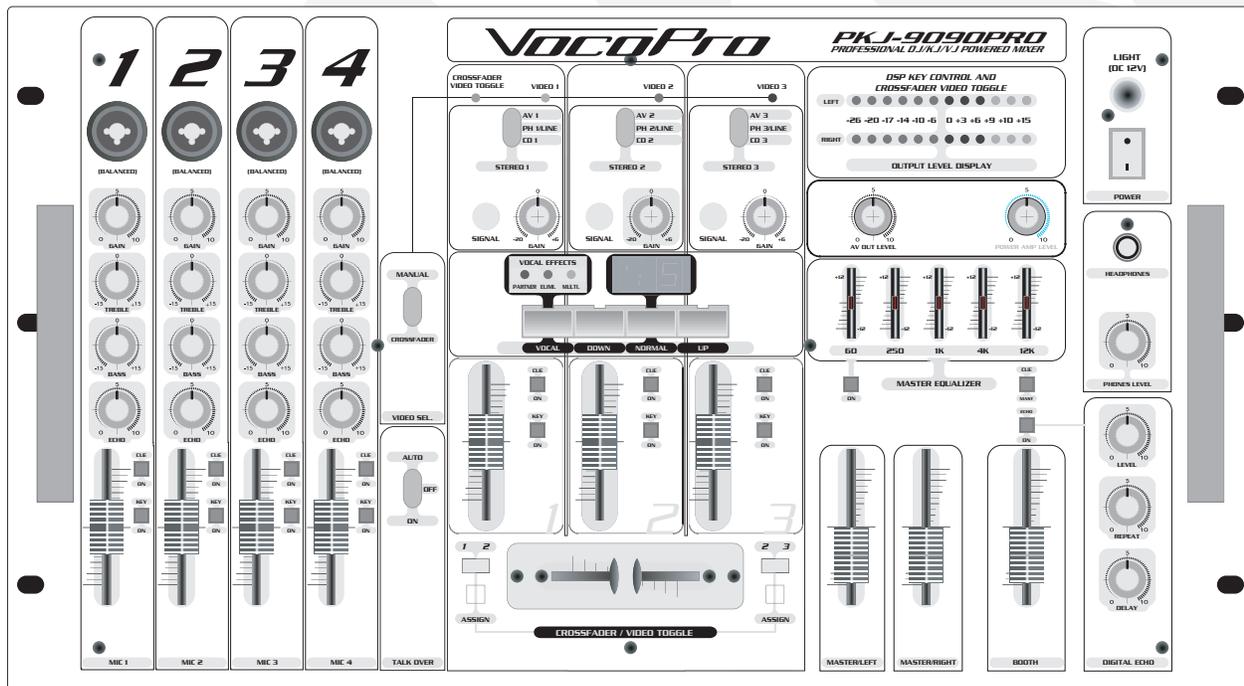


VocoPro

THE SINGER'S ULTIMATE CHOICE

- Professional grade KJ, DJ and VJ mixer with Video Select Toggle/Crossfader
- Integrated power amplifier
- 19" rack mountable, requiring only 6 spaces
- 7 input options; 4 Mics each with XLR/Phono, and 3 switchable AV/Phono/CD inputs, including a pair with line input option
- 4 Mic Insert Loops for 1/4" connection of external stereo effects
- 3 video inputs and 3 outputs for multi-screen video options
- Bridge/Stereo speaker outputs
- Bridge/Stereo switch for quick switching between Bridge and Stereo output modes.
- Assignable 11-step Digital Key Controller with 1/2 tone increments per step and Remote Key Control option
- Professional Digital Echo for each Mic channel with master Repeat and Delay and Level controls
- Vocal Cancel and Vocal Partner for use with Multiplex CDs
- Vocal Eliminator can remove lead vocals from standard recordings
- Talkover function with automatic mode, headphone jack with Level control and 12V DJ lamp jack for professional production
- 5-Band Graphic Equalizer for best fidelity and precision tuning
- Booth Phono Outputs, Balanced XLR or Unbalanced RCA Master Outputs, Auxiliary AV and Record Outputs



PKJ-9090PRO

PROFESSIONAL KARAOKE MIXER WITH DSP KEY CONTROL
AND CROSSFADER VIDEO TOGGLE

o w n e r s m a n u a l

Safety Instructions



CAUTION
RISK OF SHOCK



CAUTION: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Only refer servicing to qualified service personnel.

Explanation of Graphical Symbols



The lightning flash & arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of danger.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and servicing instructions.

WARNING

To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions - The safety and operating instructions should be retained for future reference.

3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions - All operating and use instructions should be followed.

5. Attachments - Do not use attachments not recommended by the product manufacturer as they may cause hazards.

6. Water and Moisture - Do not use this unit near water. For example, near a bathtub or in a wet basement and the like.

7. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.

7 A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause an overturn.



8. Ventilation - The appliance should be situated so its location does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation slots.

9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

11. Grounding or Polarization – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

13. Cleaning – Unplug this unit from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

14. Power lines – An outdoor antenna should be located away from power lines.

15. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

16. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

17. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:

- A. The power supply cord or plug has been damaged; or
- B. Objects have fallen into the appliance; or
- C. The appliance has been exposed to rain; or
- D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
- E. The appliance has been dropped, or the enclosure damaged.

18. Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Note:

To CATV system installer's (U.S.A.): This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected as close to the point of cable entry as practical.

FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS

UNIT!: This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Vocopro may void your authority, granted by the FCC, to use this product.

2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable(s) supplied with this product **MUST** be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the U.S.A.

3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurances that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the owner's manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "Off" and "On", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Use power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter(s).

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300-ohm ribbon lead, change the lead-in to coaxial type cable.

If these corrective measures do not produce satisfactory results, please contact your local retailer authorized to distribute Vocopro products. If you can not locate the appropriate retailer, please contact Vocopro, 1728 Curtiss Court, La Verne, CA 91750.

CAUTION

The apparatus is not disconnected from the AC power source so long as it is connected to the wall outlet, even if the apparatus itself is turned off. To fully insure that the apparatus is indeed fully void of residual power, leave unit disconnected from the AC outlet for at least fifteen seconds.

CAUTION:

READ THIS BEFORE OPERATING YOUR UNIT

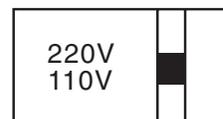
1. To ensure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.
2. Install your unit in a cool, dry, clean place - away from windows, heat sources, and too much vibration, dust, moisture or cold. Avoid sources of hum (transformers, v motors). To prevent fire or electrical shock, do not expose to rain and water.
3. Do not operate the unit upside-down.
4. Never open the cabinet. If a foreign object drops into the set, contact your dealer.
5. Place the unit in a location with adequate air circulation. Do not interfere with its proper ventilation; this will cause the internal temperature to rise and may result in a failure.
6. Do not use force on switches, knobs or cords. When moving the unit, first turn the unit off. Then gently disconnect the power plug and the cords connecting to other equipment. Never pull the cord itself.
7. Do not attempt to clean the unit with chemical solvents: this might damage the finish. Use a clean, dry cloth.
8. Be sure to read the "Troubleshooting" section on common operating errors before concluding that your unit is faulty.
9. This unit consumes a fair amount of power even when the power switch is turned off. We recommend that you unplug the power cord from the wall outlet if the unit is not going to be used for a long time. This will save electricity and help prevent fire hazards. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
10. To prevent lightning damage, pull out the power cord and remove the antenna cable during an electrical storm.
11. The general digital signals may interfere with other equipment such as tuners or receivers. Move the system farther away from such equipment if interference is observed.

NOTE:

Please check the copyright laws in your country before recording from records, compact discs, radio, etc. Recording of copyrighted material may infringe copyright laws.

Voltage Selector (General Model Only)

Be sure to position the voltage selector to match the voltage of your local power lines before installing the unit.



Listening For A Lifetime

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. VocoPro and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to a higher volume of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.
- Pay attention to the different levels in various recordings.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Some common decibel ranges:

Level	Example
30	Quiet library, Soft whispers
40	Living room, Refrigerator, Bedroom away from traffic
50	Light traffic, Normal Conversation
60	Air Conditioner at 20 ft., Sewing machine
70	Vacuum cleaner, Hair dryer, Noisy Restaurant
80	Average city traffic, Garbage disposals, Alarm clock at 2 ft.

The following noises can be dangerous under constant exposure:

Level	Example
90	Subway, Motorcycle, Truck traffic, Lawn Mower
100	Garbage truck, Chainsaw, Pneumatics drill
120	Rock band concert in front of speakers
140	Gunshot blast, Jet plane
180	Rocket launching pad

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Vocopro

ULTIMATE CHOICE OF KARAOKE ENTERTAINMENT

Specifications

Inputs Sensitivity:

MICRO 1,2,3,4 (TOP).....	1.5mV/1K ohms (Balanced XLR Jack)
AV/CD.....	150mV/10K ohms (RCA Jack)
PHONO	3.0mV/47K ohms (RCA Jack)

Outputs:

MASTER OUTPUT	1.5V/600 ohms (XLR Jack/Balance)
.....	1.5V/600 ohms (RCA Jack/Unbalance)
BOOTH OUTPUT	1.5V/600 ohms (1/4" Jack/Unbalance)
AV OUTPUT	1.5V/600 ohms (RCA Jack/Unbalance)
REC OUTPUT	500mV/600 ohms (RCA Jack/Unbalance)
HEADPHONES	400mV/32Ω
MAXIMUM OUTPUT.....	+20dBV (8.5V r.m.s.), OdBV=1V

Microphone Tone Controls:

TREBLE	+/-15dB (10KHz)
BASS.....	+/-15dB (100Hz)

Signal to noise Ratio:

MICRO	>78dB (Below Max.)
CD/LINE	>85dB (Below Max.)
PHONO	>75dB (Below Max.)

Graphic Equalizer:.....

.....	+/-12dB @ 60, 250, 1K, 4K, 12KHz
Total Harmonic Distortion:	<0.05%
Frequency Response:	20Hz~20KHz +/-1dB
Echo:	up to 300ms
Key:.....	DSP stereo key (6 steps up & down)
BNC Light:.....	DC 12V

Power Amplifier:

Power Output 1KHz, @1% THD (STEREO):	80W + 80W into 8 Ohms
.....	110W + 110W into 4 Ohms
Power Output 1KHz, @1% THD(BRIDGE):.....	160W into 8 Ohms
.....	220W into 4 Ohms
Frequency Response:	20Hz~50KHz +/-1dB
Signal to noise Ratio:.....	>98dB
Inputs Sensitivity:	1V
Damping Factor:.....	200(8 ohms (1KHz)
Total Harmonic Distortion:	<0.05%
Power Consumption:	420W

Dimensions:.....482mm(W) x 265mm(D) x 155mm(H)

Weight:.....Weight 11Kg



Welcome....



And Thank you for purchasing the **PKJ-9090PRO** from VocoPro, your ultimate choice in Karaoke entertainment! With years of experience in the music entertainment business, VocoPro is a leading manufacturer of Karaoke equipment, and has been providing patrons of bars, churches, schools, clubs and individual consumers the opportunity to sound like a star with full-scale club models, in-home systems and mobile units. All our products offer solid performance and sound reliability, and to further strengthen our commitment to customer satisfaction, we have customer service and technical support professionals ready to assist you with your needs. We have provided some contact information for you below.

VocoPro
1728 Curtiss Court
La Verne, CA 91750
Toll Free: 800-678-5348
TEL: 909-593-8893
FAX: 909-593-8890

VocoPro Company Email Directory

Customer Service & General Information
info@vocopro.com

Tech Support
techsupport@vocopro.com

Remember Our Website

Be sure to visit the VocoPro website www.vocopro.com for the latest information on new products, packages and promo's. And while you're there don't forget to check out our Club VocoPro for Karaoke news and events, chat rooms, club directories and even a Service directory!

We look forward to hearing you sound like a PRO, with VocoPro, your ultimate choice in Karaoke entertainment.

FOR YOUR RECORDS

Please record the model number and serial number below, for easy reference, in case of loss or theft. These numbers are located on the rear panel of the unit. Space is also provided for other relevant information

Model Number _____

Serial Number _____

Date of Purchase _____

Place of Purchase _____

Mounting

To mount, carefully place the PKJ-9090PRO in the rack space of your case. The PKJ-9090PRO takes 4 screws to mount. Make sure holes are aligned evenly. Use an alternating "X" rotation when screwing to ensure even tension and alignment.

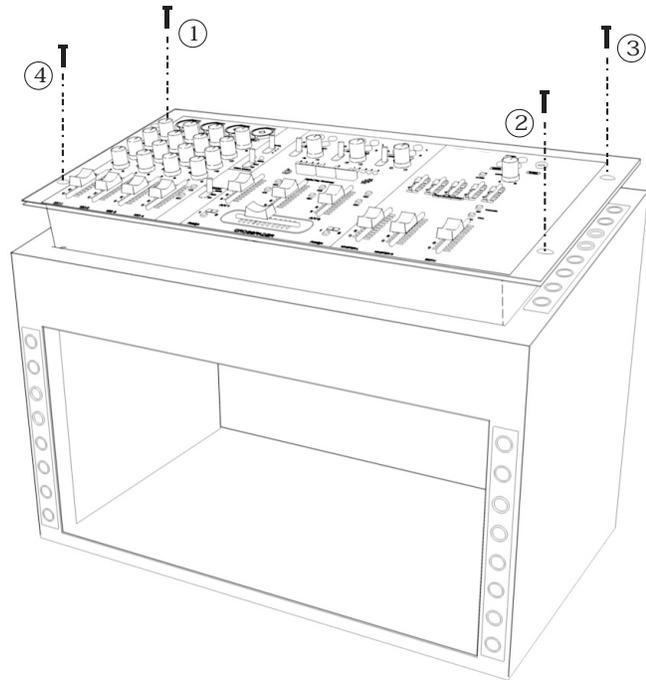
(See diagram below)

You will need:

- 19" Rack Case
- 4 Mount Screws
- Phillips-head Screwdriver

Note:

When top mounting, make sure you have at least 2 rack-spaces available.

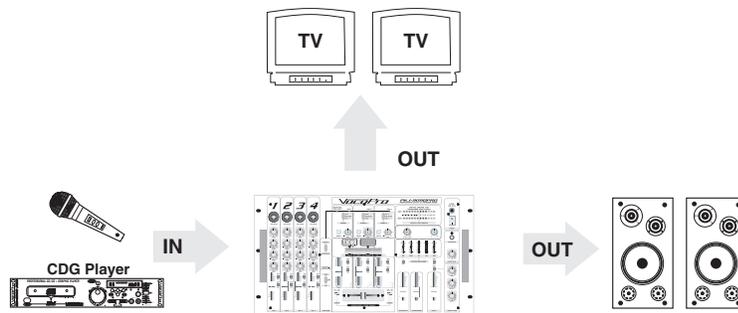


Getting Connected

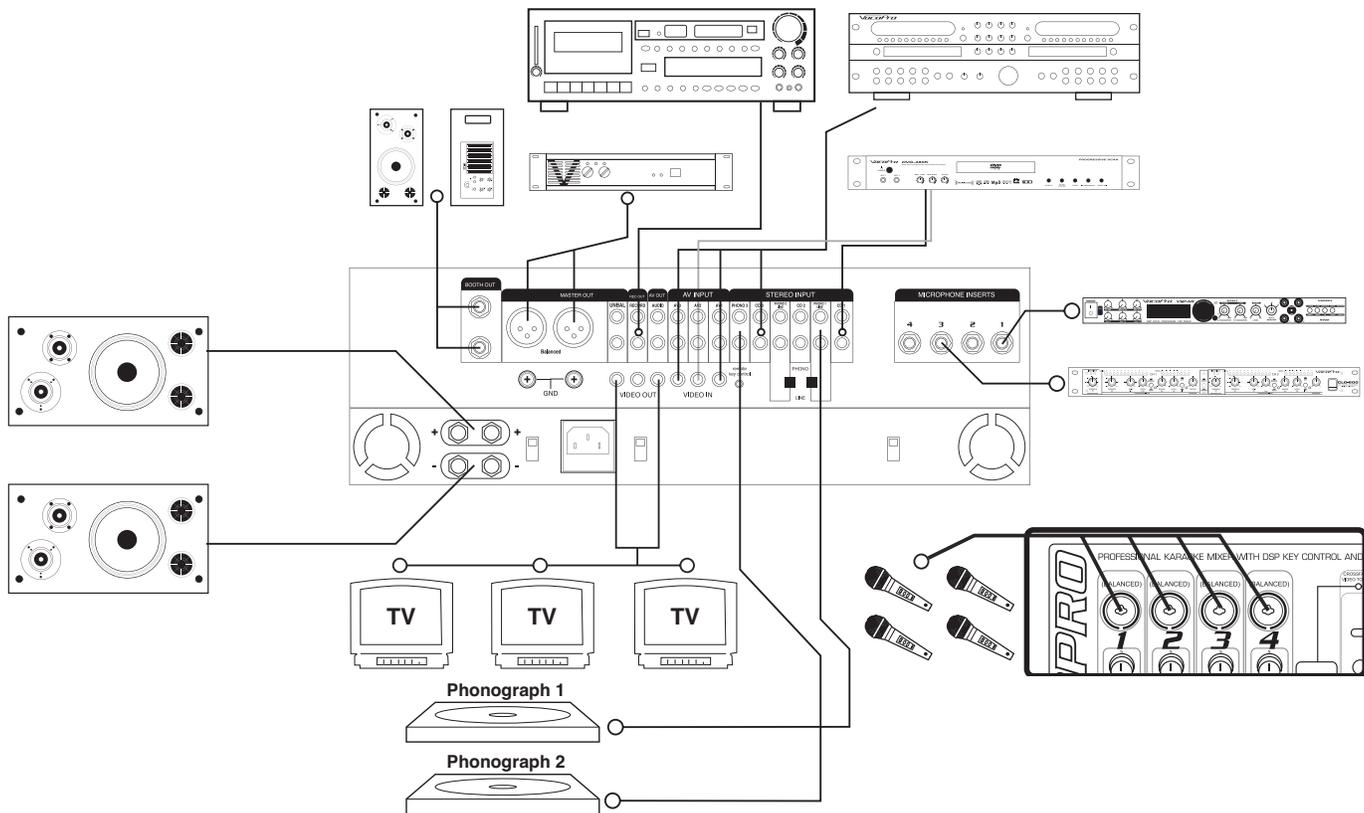
Below we provide some general information to help understand how a professional Karaoke system works and how it is connected.

Signal Path

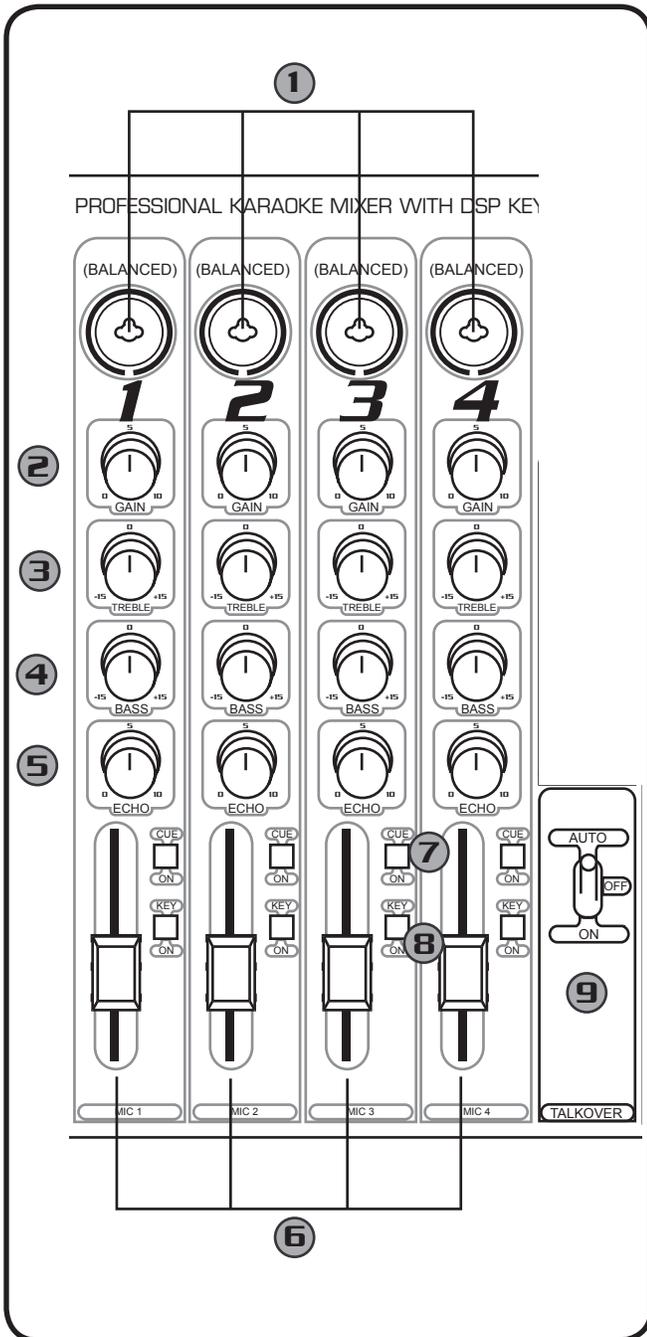
When connecting your professional Karaoke system, the key is keeping in mind the signal path from the source music into your PKJ-9090 and out to your monitor, amp and speakers. Understanding the signal path before installation will make the process easier and most likely save you lots of time! Below is a diagram illustrating a basic signal path.



Since the PKJ-9090PRO has numerous connectivity options, and there exist many variations in user needs, we illustrate a system where all possible connections are used. Note: This is a reference model only. Reference what you need from the diagram. Some connections may not apply for your setup.



Microphone Panel Descriptions and Functions



1. **XLR or ¼" MICROPHONE/LINE INPUTS** - This combination input can be used to connect either a low impedance (XLR), high impedance (¼") microphone or line-level device. The ¼" INPUT jack is located in the center of the jack housing. The XLR INPUT jack is located within the outer perimeter of the jack housing. Align the 3 pins of your XLR mic cable with the appropriate positioning in the jack.

2. **GAIN** - This controls the input level from any device that is connected to the mic/line input jack. To increase GAIN level, turn clockwise. To decrease, turn counterclockwise.

3. **TREBLE** - This controls the level for high frequency EQ. Use this control to boost or reduce the TREBLE in the audio signal. To increase TREBLE, turn clockwise. To decrease, turn counter-clockwise.

4. **BASS** - This controls the level for low frequency EQ. Use this control to boost or reduce the BASS frequencies in the audio signal.

5. **ECHO** - This controls the level of DIGITAL ECHO applied to each microphone channel. Use this control to increase or reduce the level of ECHO that is applied to the vocals.

6. **CHANNEL FADER** - The CHANNEL FADER raises or lowers the Mic or line volume of the channel as it is moved up or down.

7. **CUE** - This monitors the input signal from the mixer board to the headphones. Press CUE on any channel to hear only that channel through the headphones. Note: If you cue more than one channel, each selected channel will be audible as well.

8. **KEY** - This assigns DIGITAL KEY CONTROL to each applicable channel. If the button is pressed, the DIGITAL KEY CONTROL setting will be applied.

9. **TALKOVER** - The TALKOVER feature allows the KJ/DJ/VJ to make announcements by instantly lowering the music volume when there is mic activity. To use, select "ON." Select "OFF" to disable. When set to "AUTO," it will automatically lower the music volume when mic activity is present, and return music when no mic activity is present. Note: This feature only works with mic line 1, as that channel is designed to be used by KJs, DJs and VJs. Other channels are not affected by the Talk Over function.

Middle Panel Descriptions and Functions

1. **VIDEO SELECT** toggle - Holding this switch in the CROSSFADER position for a second, toggles video selection options between either CROSSFADER activation and MANUAL. When in CROSSFADER mode, the LED above CROSSFADER VIDEO TOGGLE will illuminate blue. This indicates that video output signal is received from the two assigned sources in the crossfader ASSIGN selections. You can alternate between any two of the three source inputs by pushing the crossfader either to the far left or far right. As you shift the crossfader in either direction, you will see the respective VIDEO 1, 2, or 3 LEDs above the SOURCE toggles illuminate. In MANUAL mode, the CROSSFADER VIDEO TOGGLE LED is not illuminated, indicating that you can manually shift between the VIDEO LEDs by simply pushing the VIDEO SELECT toggle in the MANUAL position repeatedly to cycle through VIDEO 1 (red LED), 2 (green LED) and 3 (yellow LED).

2. **STEREO CHANNEL SOURCE** toggle - This switch will toggle between AV, PHONO/LINE and CD sources connected to that channel. As stated above, if you have both a CD+G player and a turntable connected to the same channel, only that device to which this SOURCE TOGGLE is selected would be audible. Applicable graphics/video signals are output accordingly.

3. **SIGNAL** light - This light illuminates blue when a signal is received to STEREO CHANNEL 1, 2 or 3.

4. **GAIN** - This knob controls the input level from that channel's selected source. To increase the GAIN, turn clockwise.
Note: Adjusting this knob is not synonymous to adjusting the channel fader. The gain knob adjusts the input level from the source, while the channel fader adjusts the output level from the source. For best audio results, adjust GAIN until just before distortion is noticeable.

5. **VOCAL PARTNER/MULTIPLEX FUNCTION & VOCAL ELIMINATOR**

VOCAL PARTNER/MULTIPLEX - This feature can alternately remove and activate "guide" or "lead" vocals with compatible Multiplex media. On this type of media, music and lead vocals are panned hard left and right.

With the first press of this button, the red MULTIPLEX LED is lit, indicating that lead vocals have been removed, a feature also known as VOCAL CANCEL. The channel with music only is duplicated so it is heard in both left and right channels. Some backing vocals will remain if there is overlap in the way they are recorded. Pressed two more times, this button will illuminate the yellow LED to indicate VOCAL PARTNER and guide vocals will be activated.

VOCAL ELIMINATOR - Press the button until the center, green LED illuminates. With standard recordings, you will be able to partially remove lead vocals to turn any recording into a Karaoke performance or for remixing possibilities. To return to regular disc playback, press this button until all three LEDs are unlit.

6. **DIGITAL KEY CONTROL** - Key Control allows you to modify the original key of a track without changing its tempo to match the natural range of your voice. You can raise or lower your source music a total of 11 steps, or half note increments from its "natural" key. To step DOWN or "flat (b)" the key, press the left button. To step UP or "sharp (#)" the key, press the right button. To revert back to the original/natural key press the middle NORMAL button.

Note: Key changes are only cueable when Master cueing.

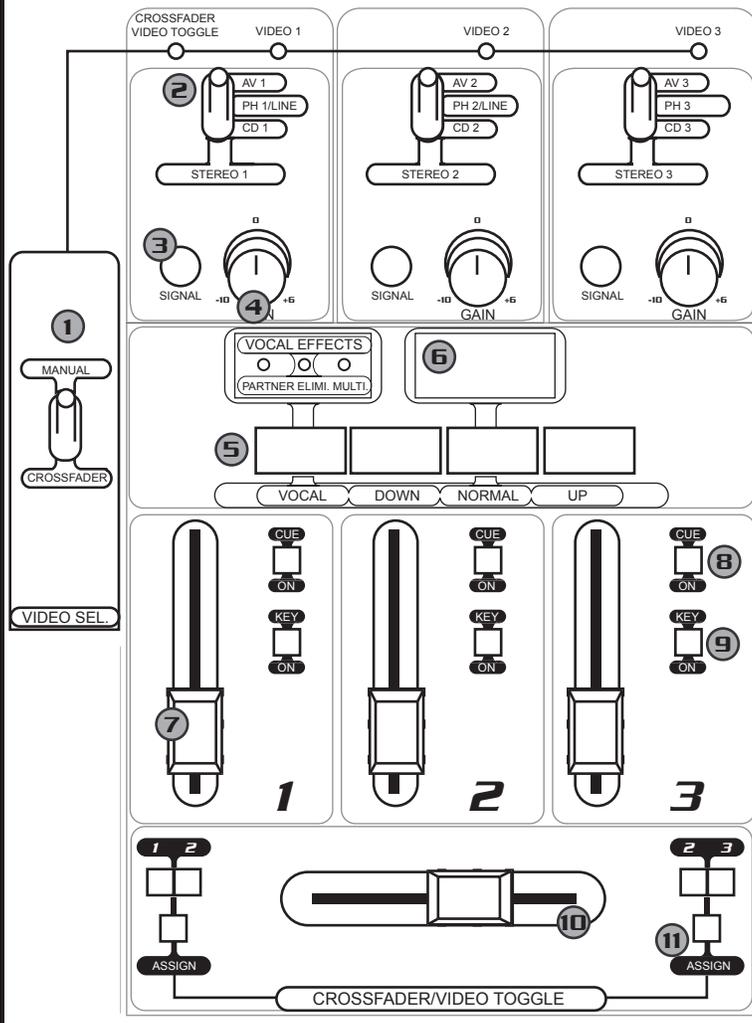
7. **CHANNEL FADER** - Each fader raises and lowers the volume of the corresponding STEREO 1, 2 or 3 channel as it is moved up or down.

8. **CUE** - This monitors the input signal from the mix board to the headphones. Press CUE to hear that channel through the headphones. Note: If you cue more than one channel, those channels will be audible as well.

9. **KEY** - This assigns DIGITAL KEY CONTROL to the channel. If the button is pressed, DIGITAL KEY CONTROL will be applied to that channel.

Middle Panel Descriptions and Functions Cont...

VIDEO CONTROL AND CROSSFADER VIDEO TOGGLE



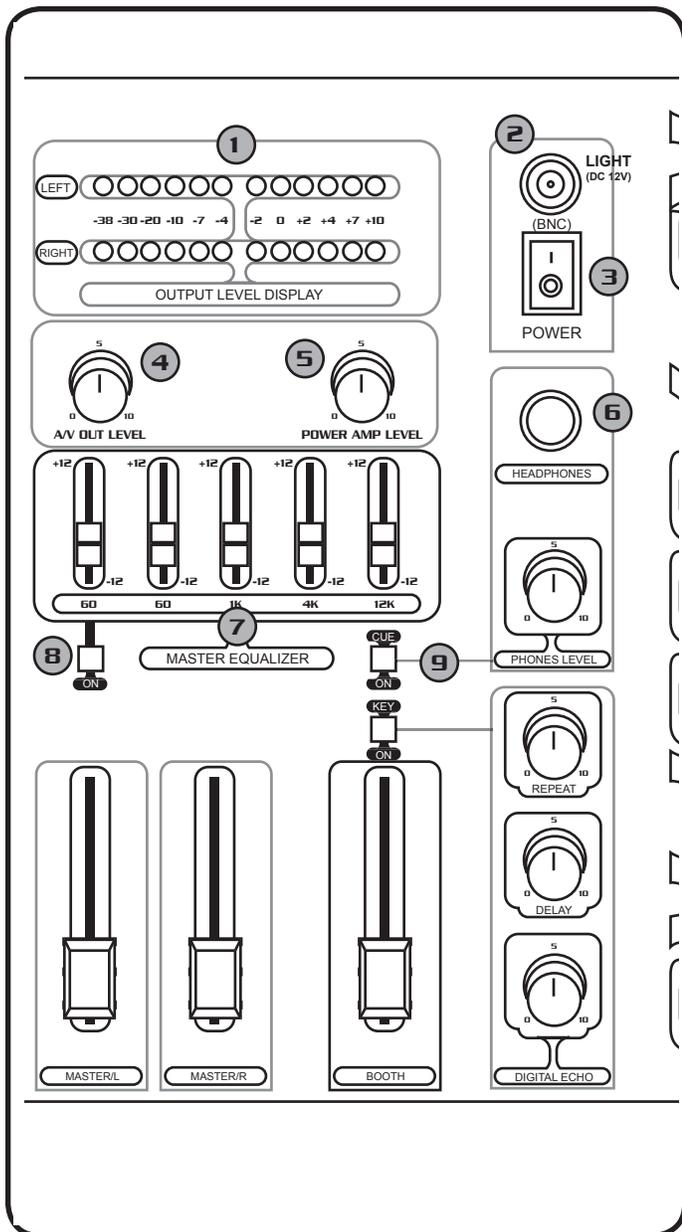
10. CROSSFADER/VIDEO TOGGLE - The CROSSFADER allows the user to fade the music out from one source and in to another source, while simultaneously switching the VIDEO TOGGLE between the two associated video inputs. For example, a clean fade from one CDG to another is possible, automatically cueing the lyrics for each disc on your video monitor. The PKJ-9090PRO eliminates manual video cueing from the music source switching process. However, you have the choice of cueing manually if you prefer or the situation calls for it. Select either MANUAL or CROSSFADER from the VIDEO SELECT toggle.

Note: The crossfader will only fade in/out from the two sources that have been assigned to it.

11. ASSIGN - These buttons work in conjunction with the CROSSFADER. Assigning channels determines which inputs will be included in the crossfade. For example, to fade between a track from STEREO CHANNEL 1 to a track cued on STEREO CHANNEL 2, the ASSIGN button on the left should be pressed to illuminate the 1 LED, and the right pressed to illuminate the 2 LED. You will hear that one input source "fades" out" while the other "fades in" when the CROSSFADER is moved from left to right.

Note: Make sure your STEREO CHANNEL SOURCE toggle is set properly to the input type you are using (see BACK PANEL for connections).

Master Panel Descriptions and Functions



1. **LED METERS** - These meters display system OUTPUT LEVELS. For maximum performance with a clean, undistorted signal, increase source output, as well as the PKJ-909OPRO's GAIN, CHANNEL FADER and L/R MASTER FADERS until meter peaks in the yellow LED range (-2 to +4). Input should rarely cause meters to peak in the range of the red LEDs for best sound.

2. **12V LIGHT JACK (BNC)** - This BNC style jack is for connecting a 12V DJ LIGHT, ideal for mixing in dark environments.

3. **POWER** - This button turns the PKJ-909OPRO ON in the upper position and OFF in the lower position.

4. **AV OUT LEVEL** control - This level control only affects the RCA jacks from AV OUT on the back panel. MASTER and CHANNEL faders will not effect output levels from these jacks.

5. **POWER AMP LEVEL** control - This level control affects the audio output volume from the PKJ-9090's power amp. If you are not using the power amp's outputs this control will not adjust the volume.

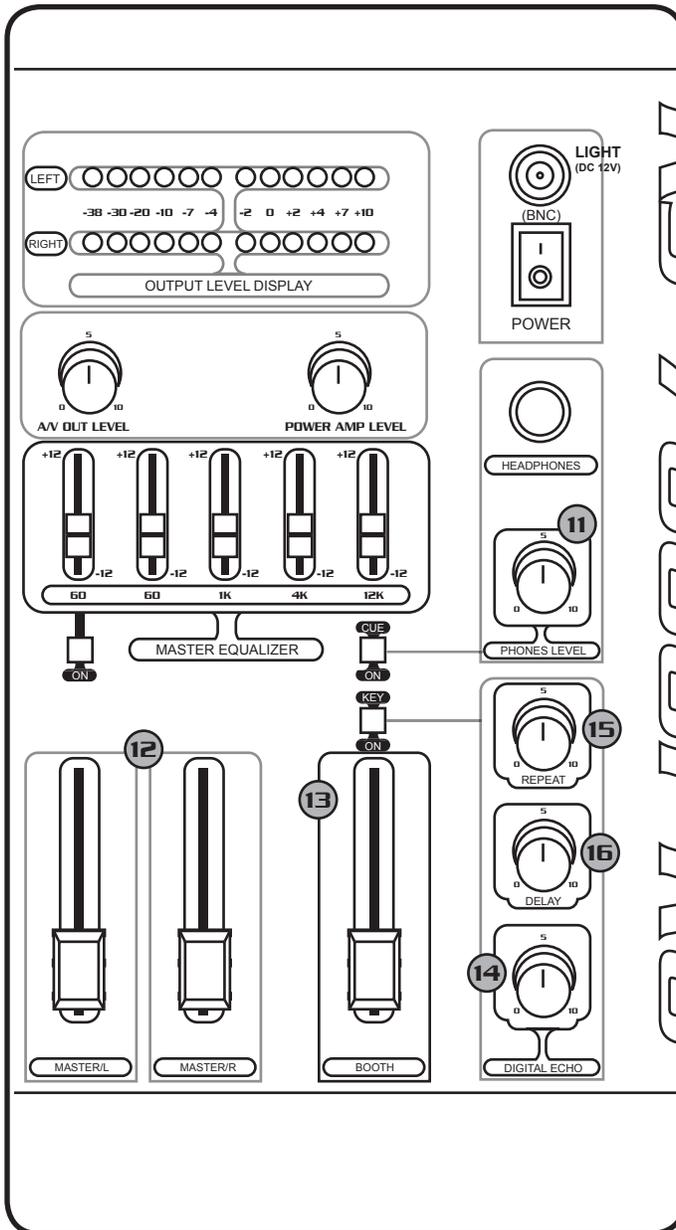
6. **HEADPHONES** jack - This 1/4" jack is for connecting HEADPHONES.

7. **MASTER EQUALIZER** - This 5-band, Graphic EQ gives you additional control over your tone in the 60 Hz, 250 Hz, 1KHz, 4KHz and 12KHz frequencies with a +/- 12 boost or cut for precise room tuning. Adjust these controls to suit your sound quality preferences.

8. **MASTER EQUALIZER ON/OFF** - This button must be pressed in to activate the Graphic EQ.

9. **CUE/MASTER** - This button toggles between CHANNEL Cueing and MASTER Cueing. When CHANNEL cueing, you will only hear channels that have been selected for Cueing. When MASTER Cueing, you will hear MASTER OUTPUT, regardless of which channels have been selected for Cueing. Note: Digital Key Control changes are only audible when MASTER Cueing.

Master Panel Descriptions and Functions Cont...



10. **ECHO** - This button controls whether ECHO is applied to selected MIC channels. If this button is pressed to the in position, the ECHO settings will be applied to any assigned channels. If it is in the extended position, the ECHO settings will not be applied to any channel, whether individually selected or not. Individual channel ECHO is adjusted through MIC channel ECHO control.

11. **PHONES LEVEL** - This control adjusts the headphones volume level when cueing. Turn clockwise for more volume and counter-clockwise for less volume.

Note: Volume output may be much louder when CHANNEL cueing than MASTER cueing. It is recommended to adjust this level prior to toggling between cue options.

12. **MASTER L/R FADERS** - These slide controls raise and lower the Left and Right MASTER OUTPUT levels for all stereo channels as they are moved up and down, providing an overall volume level for each channel mixed together. Balance each channel's individual fader control for the best mix.

13. **BOOTH FADER** - This slide control raises or lowers the output level for the BOOTH OUT located on the back panel.

Note: This slide control is only functional when monitors or a control booth is connected from the corresponding outputs.

14. **ECHO LEVEL** - This control serves as a master LEVEL for the ECHO settings. If ECHO is assigned to a MIC channel, this knob will control how much ECHO is applied before individual adjustments. Each channel-specific echo control and should be used in unison with this master level control.

15. **REPEAT** - This control adjusts the number of ECHO repetitions before the effect "decays." In other words, as more REPEAT is applied, more echo intervals will be heard before the ECHO fades out.

16. **DELAY** - This control adjusts length of each time between ECHO intervals. As more DELAY is applied, there will be the illusion of more "space" between the starting and ending point of each echo.

Rear Panel (Mixer) Descriptions and Functions

1. **BOOTH OUT** - These 1/4" jacks are for sending audio to BOOTH/MONITOR speakers. The output level to the BOOTH/MONITOR speakers is controlled via the BOOTH fader. Connect an appropriate cable from these jacks to your BOOTH/MONITOR speakers. Note: If your Booth/Monitor speakers do not have a built-in amplifier, you will need to connect them to a dedicated amplifier to power them.

2. **BALANCED (XLR) MASTER OUT** - These BALANCED MASTER OUT jacks are for balanced XLR cables. These jacks provide connection to a power amplifier.

Note: If your amplifier has 1/4" input jacks, you will need 1/4" to XLR cables or adaptors. Some amplifiers offer multiple connection options, including RCA "unbalanced" input. See number 4.

3. **UNBALANCED (RCA) MASTER OUT** - These UNBALANCED MASTER OUT jacks are for standard RCA cables. These jacks provide connection to a power amplifier as well. Note: If your amplifier has 1/4" input jacks, you will need 1/4" to RCA cables or adaptors.

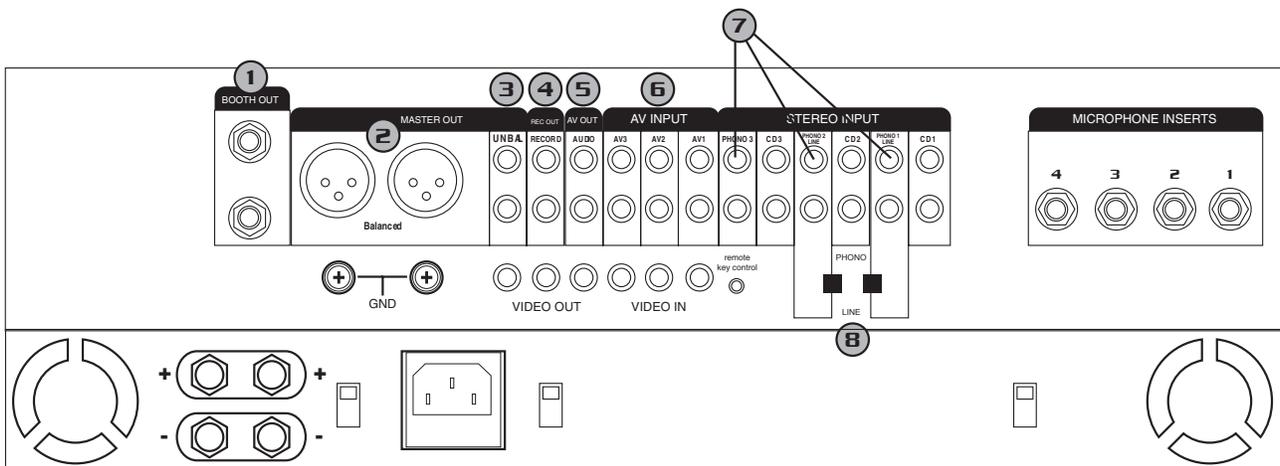
4. **RECORD OUT** - These L/R RCA jacks bypass the MASTER OUTS for connection to any CD burner, cassette, or DAT recorder to record your mix. Ideal for the mobile DJ/KJ that wants to offer their customer a recording at the end of their performance.

5. **AV OUT** - In addition to the MASTER and BOOTH outs, this mixed RCA L/R output gives you an additional option for connection of your mix to external components. Use in conjunction with the AV OUT LEVEL on the Master Panel to control the signal level.

6. **AV INPUT 1, 2, 3** - These STEREO INPUT jacks are for connecting external components to the PKL-9090PRO. You can connect any L/R RCA cables to these inputs, but there are dedicated inputs for CD or PHONO/LINE to provide optimal sound quality. Adjust the STEREO CHANNEL SOURCE toggle on the middle panel of the PKJ-9090PRO accordingly.

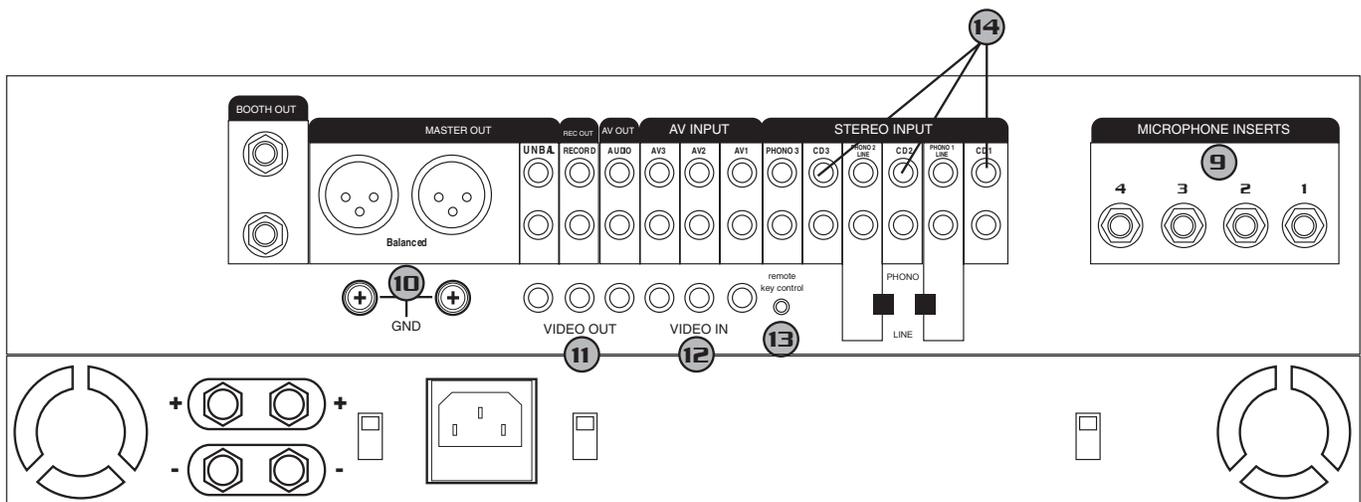
7. **PHONO 1, 2, 3/LINE INPUT** - Use these STEREO INPUT jacks to connect turntables using L/R RCA. With PHONO 1 and 2, you also have the option of selecting line input, using #9 in conjunction with these jacks. Adjust the STEREO CHANNEL SOURCE toggle on the middle panel of the PKJ-9090PRO accordingly.

8. **PHONO/LINE** switches - When inputting turntables to the PHONO/LINE 1 or 2 STEREO INPUT jacks, use the accompanying switch. Select the out position to toggle to PHONO and the in position to toggle to LINE input type.



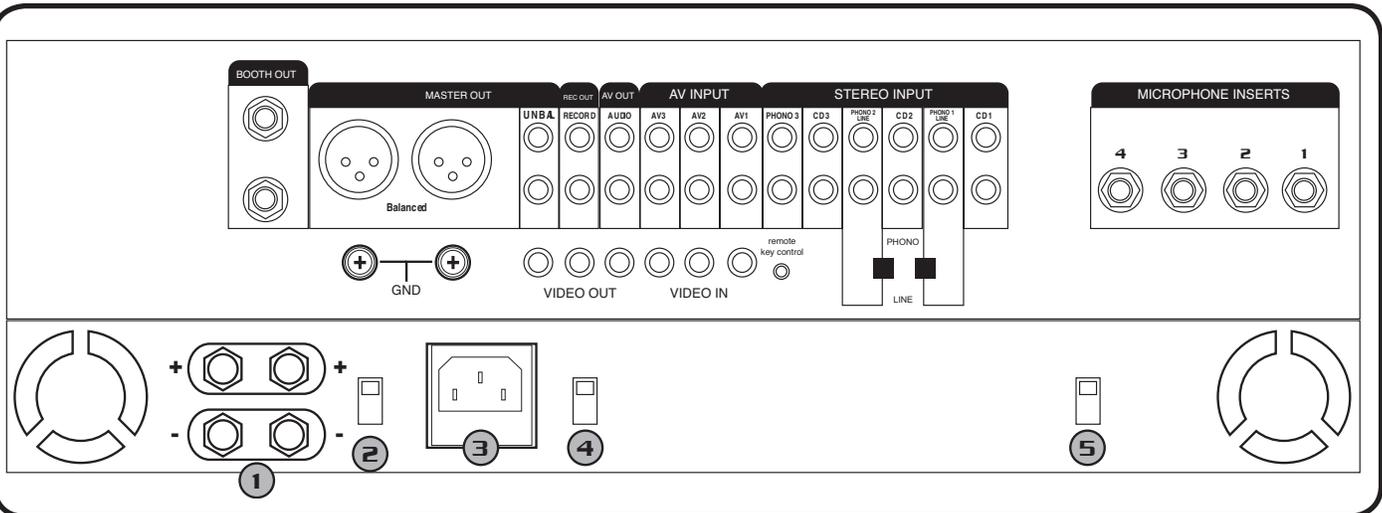
Rear Panel (Mixer) Descriptions and Functions Cont...

9. **MICROPHONE INSERTS** - These jacks are for connecting out-board effects units. The audio from the MIC channels are routed out from the INSERT jacks to your out-board effects unit(s) and routed back with the effects applied, using only a single cable. In order to use these jacks, you will need appropriate TRS (tip = send, ring = return, sleeve = signal ground) insert cables.
10. **GROUND TERMINALS** - These TERMINALS are for connecting ground wires. If you are experiencing line noise, attach wire from here to your other devices or similar suitable surface.
11. **VIDEO OUT 1, 2, 3** - These jacks send graphics from input source player video output to video display device(s) such as TVs, TFTs and Monitors. Connect video cables from these VIDEO OUT jacks to the VIDEO IN jacks on your video display device(s).
12. **VIDEO IN 1, 2, 3** - These jacks allow the video component of CD+G, DVD, VCD and LD players to be connected to the PKJ-9090PRO. Connect video cables from the VIDEO OUT jacks on your player(s) to these VIDEO IN jacks.
13. **REMOTE KEY CONTROL** - This 1/8" jack is for connecting a REMOTE KEY CONTROL cable. Remote Key Control allows you to make key changes at a distance from the Digital Key Controller on the PKJ-9090PRO.
14. **CD INPUT 1, 2, 3** - Use these dedicated inputs for CD players as source music with RCA L/R cables. Adjust the STEREO CHANNEL SOURCE toggle on the middle panel of the PKJ-9090PRO accordingly.



Rear Panel (Amp) Descriptions and Functions

- 1. SPEAKER/BRIDGE OUTPUTS** - This connection outputs to speakers using "banana cables". You have the option of using the Bridge configuration or the Stereo configuration. See the OPERATIONS section for instructions on using the STEREO or BRIDGE configuration.
- 2. GROUND LIFT switch** - A "ground loop" is a phenomenon where an unintended connection to ground is made through an interfering electrical conductor, causing what is known as "60Hz hum." A GROUND LIFT switch adds a resistor between the ground and cable shield when switched on, effectively ridding the system of hum.
- 3. AC INPUT** - This is the terminal for the AC power cable. Carefully insert the AC power cable here. The AC power cable should fit firm into housing.
- 4. VOLTAGE SELECTOR** - This switch can change the voltage from 115V to 230V. Before your PKJ-9090PRO is shipped from the factory, the switch is set to 115V. If you live in an area that has different voltage requirements (230-240V), you MUST set it to 230V.
- 5. STEREO/BRIDGE selector** - Choose between STEREO or BRIDGE output modes.



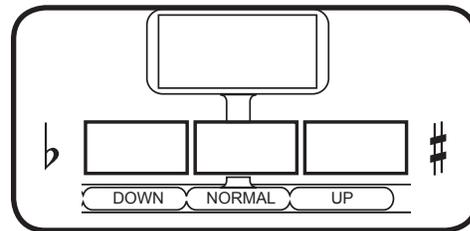
Advanced Operations

Digital Key Control

Using Digital Key Control

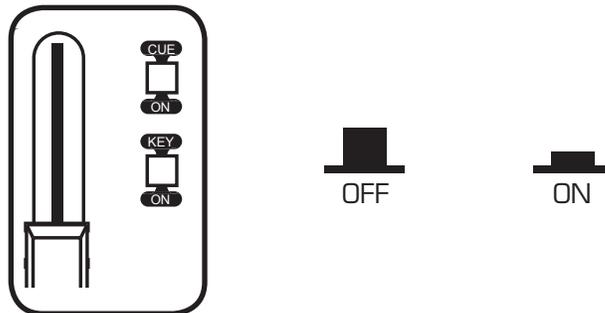
Use the Digital Key Controller to obtain the a musical key that matches the natural range of your voice. You can increase or decrease the original or "NORMAL" note by 6 steps to cover the total musical range of 12 different keys. The Digital Key Controller indicator displays either 0 for NORMAL key or ± 6 on the DOWN and UP sides. To step UP, or "#" press the right button. To step DOWN, or "b" press the left button. To revert back to the original key, press the NORMAL button.

-  -Flat (1/2 step down)
-  -Natural (Reset to "Normal" key)
-  -Sharp (1/2 step up)



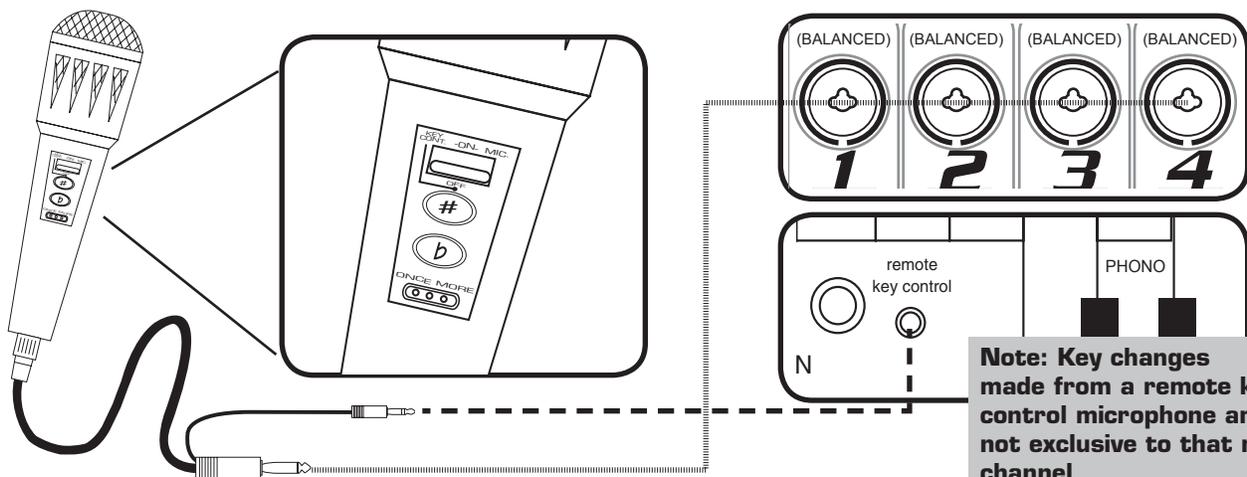
Assigning Digital Key Control to MIC and STEREO Channels

You can assign the Key Control to any channel you desire. To ASSIGN, you simply press the KEY button located to the right of the fader on each channel you want the key changes to be applied to (both MIC and STEREO inputs) and the key changes will take immediate effect. To REMOVE a key change from a channel, simply depress the KEY button from that channel, and it is removed.



Remote Key Controlling of assigned STEREO and MIC inputs

It is also possible to control the input key of assigned channels with a REMOTE KEY CONTROL such as our MARK-10 Key Control Microphone. Connect the 1/4" cable to a MIC input, and insert its 1/8" plug into the REMOTE KEY CONTROL jack (pg 15, #17). Use the device's Key Control buttons to modify the key.



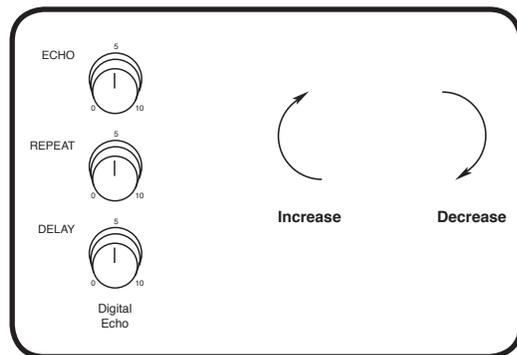
Note: Key changes made from a remote key control microphone are not exclusive to that mic channel

Advanced Operations Cont...

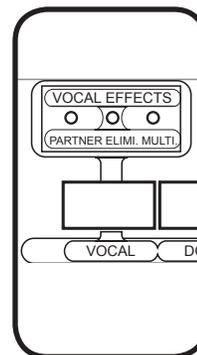
Digital Echo

Customizing Digital Echo settings (See Figure 1)

When using Digital Echo, you can customize the effect by adjusting the ECHO, REPEAT and DELAY controls. First set the ECHO level control to 5. Then customize the effect with the REPEAT and DELAY level controls. REPEAT adjusts the interval repetition of the echo effect. As more REPEAT is applied, more echo intervals will be heard when using it and vice versa. DELAY adjusts length of each interval. As more DELAY is applied, there will be more "space" between the starting and ending point of each echo. When the Digital Echo effect is customized, adjust the ECHO level control as you would a master level control.



(Figure 1)



(Figure 2)

Vocal Partner/Vocal Eliminator/Multiplex features v(See Figure 2)

The VOCAL button can switch between three modes

1. **MULTIPLEX** - With Multiplex media, music and lead vocals are panned hard left and right. With the first press of this button, the red MULTIPLEX LED is lit, indicating that lead vocals have been removed. This feature is also known as VOCAL CANCEL. The channel with music only is duplicated so it is heard in both left and right channels. Some backing vocals will remain if there is overlap in the way they are recorded.
2. **VOCAL PARTNER** - Pressed two more times, the VOCAL button will illuminate the yellow LED to indicate VOCAL PARTNER and "guide" or "lead" vocals will be activated. In this mode, the vocal layer will be cancelled only as long there is Mic activity present. When there is no Mic/Line activity present, the vocal layer appears for continuity. In other words, while you are singing, the vocal layer is cancelled, and when you are not singing, the vocal layer is output. This mode is commonly used when a solo singer wants to simulate a duet, with the KJ-7800 as the "partner."
3. **VOCAL ELIMINATOR** - Press the VOCAL button until the center, green LED illuminates. With standard recordings, you will be able to partially remove lead vocals to turn any recording into a Karaoke performance or for remixing possibilities. It is not possible for such an effect to entirely remove vocals from a recording because it operates by selecting certain frequencies that best represent the vocal range in the center of a mix. Naturally, this removes other tones in these frequencies with it. To return to regular disc playback, press this button until all three LEDs are unlit.

Advanced Operations Cont...

Talk Over

Making an announcement during playback

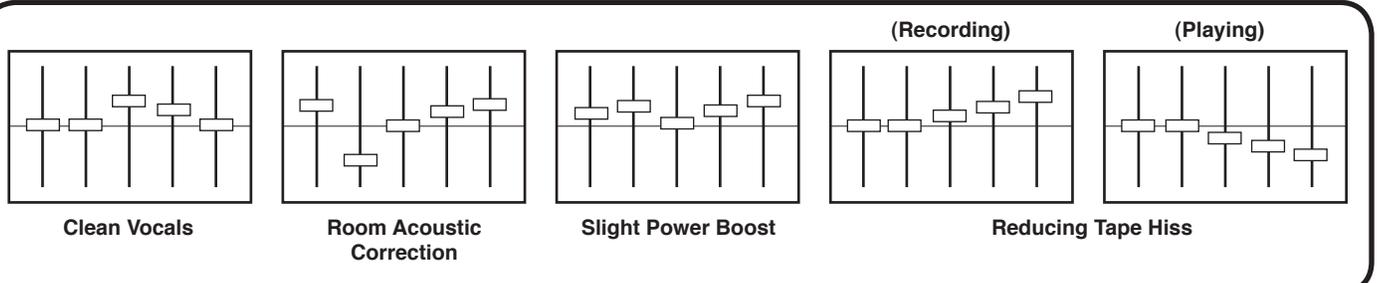
To make an announcement during music playback, you most likely will want the music at a low enough volume so that you can be heard over the music clearly. To do this, you use the TALK OVER function(pg 9, #9) when the toggle is set to ON, the music volume is lowered considerably to allow for the announcement. When done with the announcement, you switch the toggle back to OFF to return the music back to the level it was originally. If you make several announcements, and want to avoid Talk Over On/Off switching, use the AUTO mode. When in AUTO mode, the music volume level will automatically lower whenever there is mic activity during an announcement and return when the announcement is over.

Note: Talk Over only works with Mic 1. If you try to use it when speaking into Mic 2, 3 or 4, it will not work. Mic 1 is reserved as the KJ/DJ Mic.

Graphic Equalizer

Fine tuning music for precise room tuning

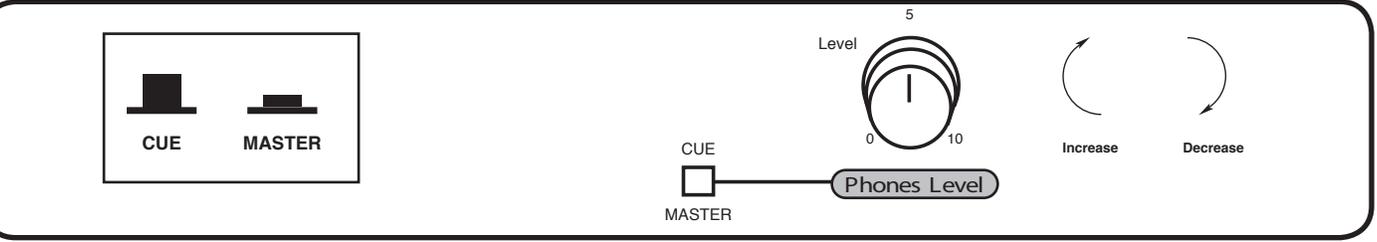
To fine tune the sound of your musical output, we included the 5-Band Graphic EQ. This EQ makes adjusting the warmth or sharpness of your music a breeze. Frequency range settings are: 60, 250, 1k, 4k and 12k. The lows are 60 and 250, the mid is 1k and the highs are 4k and 12k. Below we have provided some common general settings.



Cueing

Channel Cueing

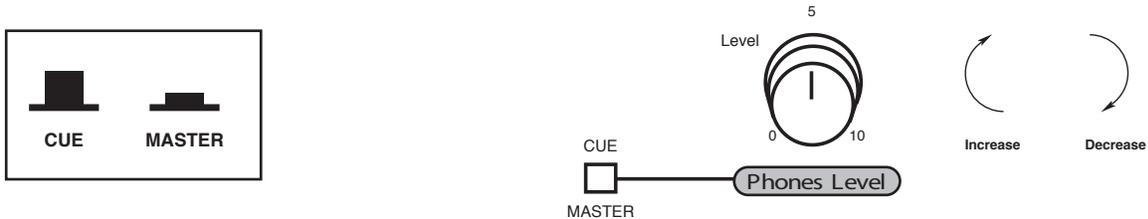
Channel cueing monitors the input signal(s) from the mix board to the headphones. When channel cueing, you can select as many channels as you like to cue to headphones. To CHANNEL CUE, first make sure the MASTER/CUE SELECTOR button is set to CUE. Then press the CUE button on each channel that you want cued to the headphones. To REMOVE a channel from being cued, simply depress that channels CUE button. To INCREASE or DECREASE the volume level to headphones, use the CUE LEVEL control located next to the Cue/Master button. Note: It is recommended to only cue necessary channels, as too many cued channels can be difficult to discern from one another. Also when channel cueing, any Digital Key changes in effect will not be audible to the headphones.



Advanced Operations Cont...

Master Cueing

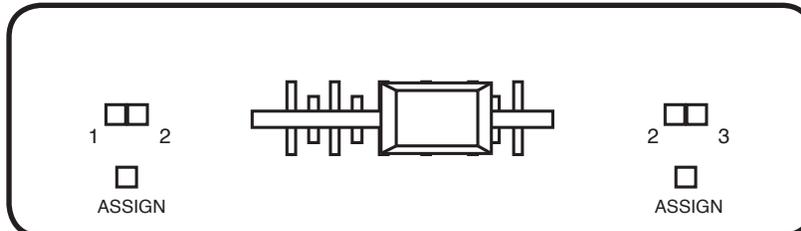
Master Cueing will cue the MASTER OUTPUT to the headphones. This is commonly used to isolate the audio signal to the headphones. Master cueing makes it possible to practice when “audible” music is not permitted i.e. late night practicing at home. To MASTER CUE, make sure the CUE/MASTER button is set to MASTER and adjust the CUE LEVEL control to a desired volume level. Note: When master cueing, pressing any channels individual Cue button will not affect output to the headphones as those buttons only work when channel cueing.



Crossfading between sources

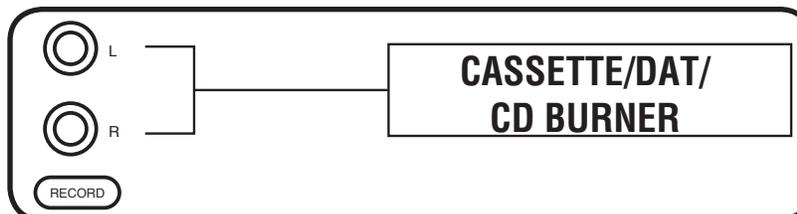
The crossfader allows you to “mix” or crossfade between two channels while toggling between corresponding video outputs. To do this, you need to first ASSIGN the two channels to your CROSSFADER. On each side of the CROSSFADER, there is an ASSIGN button. The LEFT ASSIGN button can assign either CHANNEL 1 or 2, while the RIGHT ASSIGN button can assign either CHANNEL 2 or 3. Once you have your desired channels assigned, move their respective CHANNEL FADERS to an audible level, and slide the CROSSFADER back and forth to crossfade.

Note: If you assign channel 2 on both sides, the crossfader will not crossfade.



Recording a Performance or Mix

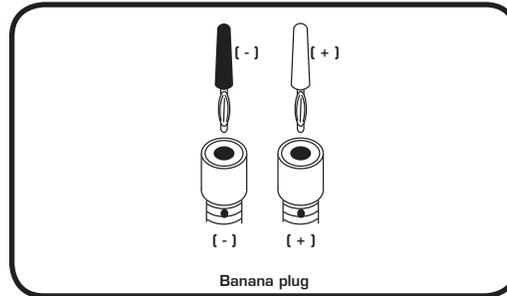
To RECORD a mix or performance, connect a line-level patch cable from the RECORD OUT to the AUDIO IN of a recording device.



Advanced Operations Cont...

Bridge Operation

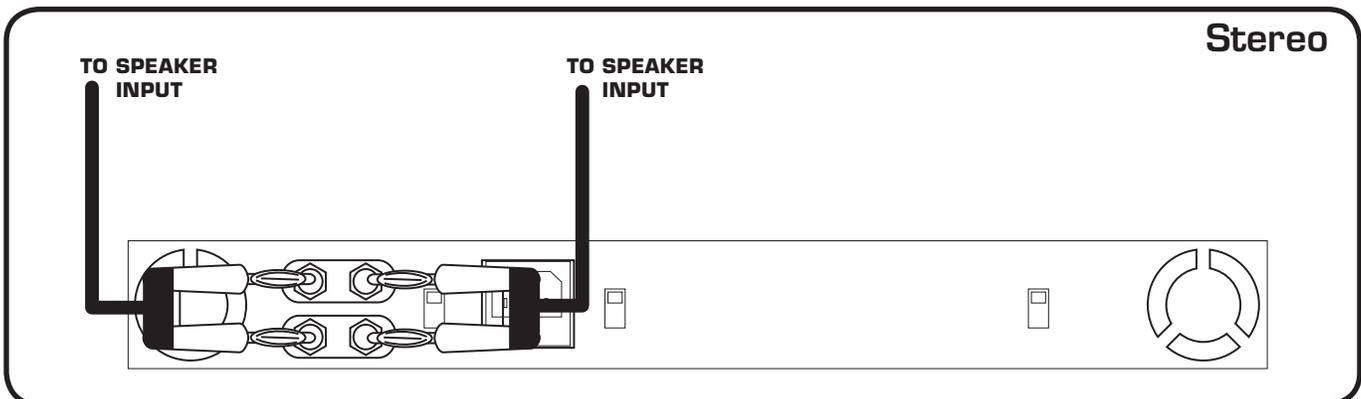
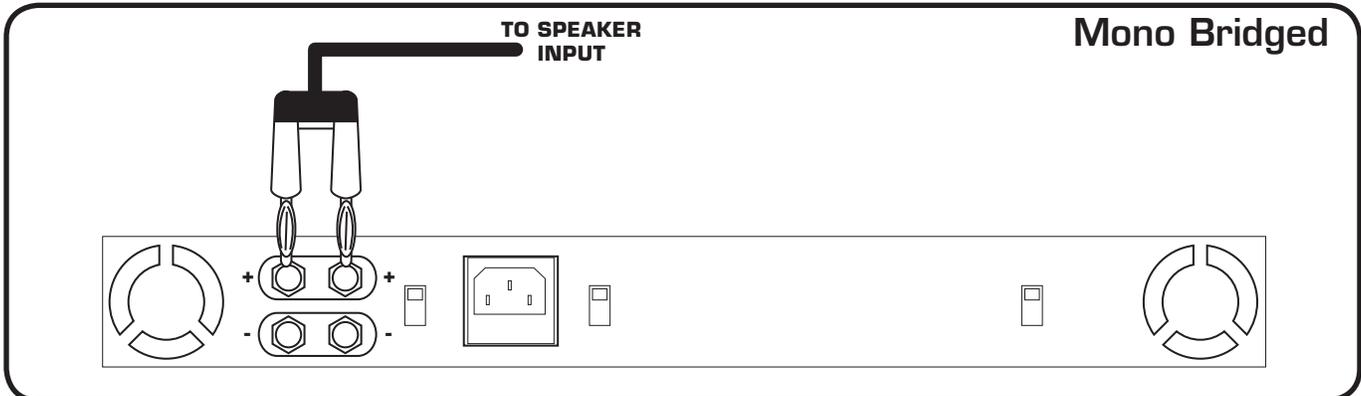
1. Set the STEREO/BRIDGE switch to the BRIDGE position.
2. With the PKJ-9090's power OFF, connect the banana plug cables from the speaker's output to the STEREO.BRIDGE input horizontally. When using the bridge connection, only one cable can be used.



STEREO AND BRIDGE OUTPUT CONFIGURATIONS

Stereo Operation

1. Set the STEREO/BRIDGE switch to the STEREO position.
2. With the PKJ-9090's power OFF, connect the banana plug cables from the speaker's output to the STEREO/BRIDGE input vertically with the left speaker plugged in to the L side and the right speaker plugged into the R side. See the figure below.



Troubleshooting

Problems	Possible Cause(s)	Solution(s)
No sound coming from selected music source	Source toggle switch is set incorrectly	Change source toggle to the correct setting
	Gain or master levels are turned down	Raise gain and master levels to an appropriate level
	External device(s) are either not connected or not working properly	Check external device(s) connections and viability
No video output from display devices	Player source is not properly connected to the KJ-7800 Video in, or the KJ-7800 out to the display monitor	Check all video connections in from the player and to the video monitor out from the KJ-7800.
	Video cable(s) are not properly connected	Reconnect cables firmly to correct video jacks
	Disc medium is not formatted for video	Play a video formatted disc i.e. CD+G, VCD, LD or DVD
Video cancel/partner features are not working properly	Disc is not multiplexed	Insert a multiplexed disc
Talk over feature lowers microphone volume with music volume	Microphone being used is not plugged into Mic channel 1	Connect microphone to Mic channel 1
Crossfader isn't fading between channels	Active source(s) are not assigned to the crossfader	Assign active sources to the crossfader
No channels or volume being cued to head phones	Cue buttons for channel(s) are not selected	Press Cue button on channel(s) you want cued
	Cue level is turned down too low	Turn up cue volume level
	Cue/Master button is set to "Master" preventing selectable channel cueing	Press Cue/Master button in for "Cue" setting
No audio being routed through insert channels	Cable(s) connected are not designed for "Insert" use	Replace cables with proper Insert cables
No echo applied to audio	Echo master level control is turned down	Turn echo master level control up
	Echo On/Off button is set to off	Set echo On/Off button to On
	Channel specific echo level control is turned down	Turn channel specific echo level control up
High-pitched squealing occurs when using the microphone	Microphone is pointed to, or too close to speakers	Move microphone away from speakers
	Treble level(s) are too high on microphone channel(s)	Turn down treble level(s) on microphone channel(s)

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