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> JOYO Vocal Lab R-16 Harmony Pedal Instruction Manual

## JOYO Manufacturer-JOYO-R16-0011

# JOYO Vocal Lab R-16 Harmony Pedal Instruction Manual

Model: Manufacturer-JOYO-R16-0011 | Brand: JOYO

## 1. INTRODUCTION AND OVERVIEW

The JOYO Vocal Lab R-16 is a versatile vocal harmony pedal designed for singers and guitarists. It offers a range of vocal harmony effects, multiple reverb models, and essential features like phantom power, making it suitable for various performance and recording environments. This manual provides detailed instructions for setting up, operating, and maintaining your Vocal Lab R-16 pedal.



## VOCAL LAB Pedal

The first vocal effector from JOYO, specially designed for singing! VOCAL LAB offers fabulous harmony effects: 9 vocal harmony effects, tonality(24 major or minor diatonic scales)is available, with Maj/Min toggle switch, up to 2 tracks of harmony can be added simultaneously.

Image: The JOYO Vocal Lab R-16 pedal, highlighting its core capabilities including 9 vocal harmony effects and 3 reverb models.

## 2. SAFETY INFORMATION

- Ensure the pedal is connected to a stable 9V DC power supply with a minimum of 500mA current output. Using an incorrect power supply can damage the unit and void the warranty.
- Do not expose the unit to water, moisture, or high humidity.
- Avoid operating the pedal in extremely hot or cold environments.
- Do not attempt to open or modify the unit. Refer all servicing to qualified personnel.
- Keep out of reach of children.

### 3. PACKAGE CONTENTS

- JOYO Vocal Lab R-16 Vocal Harmony Pedal
- Instruction Manual
- (Power adapter and cables are typically sold separately unless specified by the retailer.)

### 4. CONTROLS AND FUNCTIONS

#### 4.1. Front Panel Controls

## Optimal Circuit & Bypass Design

1. VOCAL LAB features independent adjustable vocal reverb effect, independent footswitches for harmony and reverb effects respectively.
2. With 48V phantom power, compatible for several types of mic.



Image: Detailed view of the Vocal Lab R-16's front panel, illustrating the layout of its various controls.

#### Harmony Knob (1-9):

Selects one of the 9 vocal harmony effects. The specific harmony types are listed on the pedal's surface:



Image: Close-up of the Harmony knob and its corresponding list of effects.

1. Unison
2. Low
3. High
4. Low & High
5. Lower
6. Higher
7. Lower & Higher
8. Low & Lower
9. High & Higher

#### **HAR.MIX Knob:**

Adjusts the mix level of the harmony effect relative to your dry vocal signal.

#### **Major/Minor Toggle Switch:**

Switches between major and minor scales for the harmony effects, ensuring the harmonies are in key with your performance.

#### **Key Select Knob:**

Selects the musical key for the harmony effects. The display shows the selected key (e.g., 'd' for D major/minor).



Image: Close-up of the Key Select knob and its digital display.

**Reverb Knob (Small, Medium, Large):**

Selects one of the 3 reverb models, offering different spatial characteristics for your vocals.



Image: Close-up of the Reverb knob and its three settings.

**MIC GAIN Knob & LED:**

Adjusts the input gain for the microphone. The LED indicator shows the input level: Green for optimal, Red for clipping/distortion. Adjust the gain to keep the LED green for best sound quality.

**48V Phantom Power Switch (OFF/ON):**

Activates 48V phantom power for condenser microphones. Ensure this is OFF when connecting or disconnecting microphones to prevent damage.

**GND LIFT Switch:**

Helps eliminate ground loop hum when connected to other audio equipment.

**Harmony Footswitch:**

Engages or bypasses the selected vocal harmony effect. Features an LED indicator.

**Reverb Footswitch:**

Engages or bypasses the reverb effect. Features an LED indicator.



Image: Close-up of the footswitches and their LED indicators.

## 4.2. Rear Panel Connections

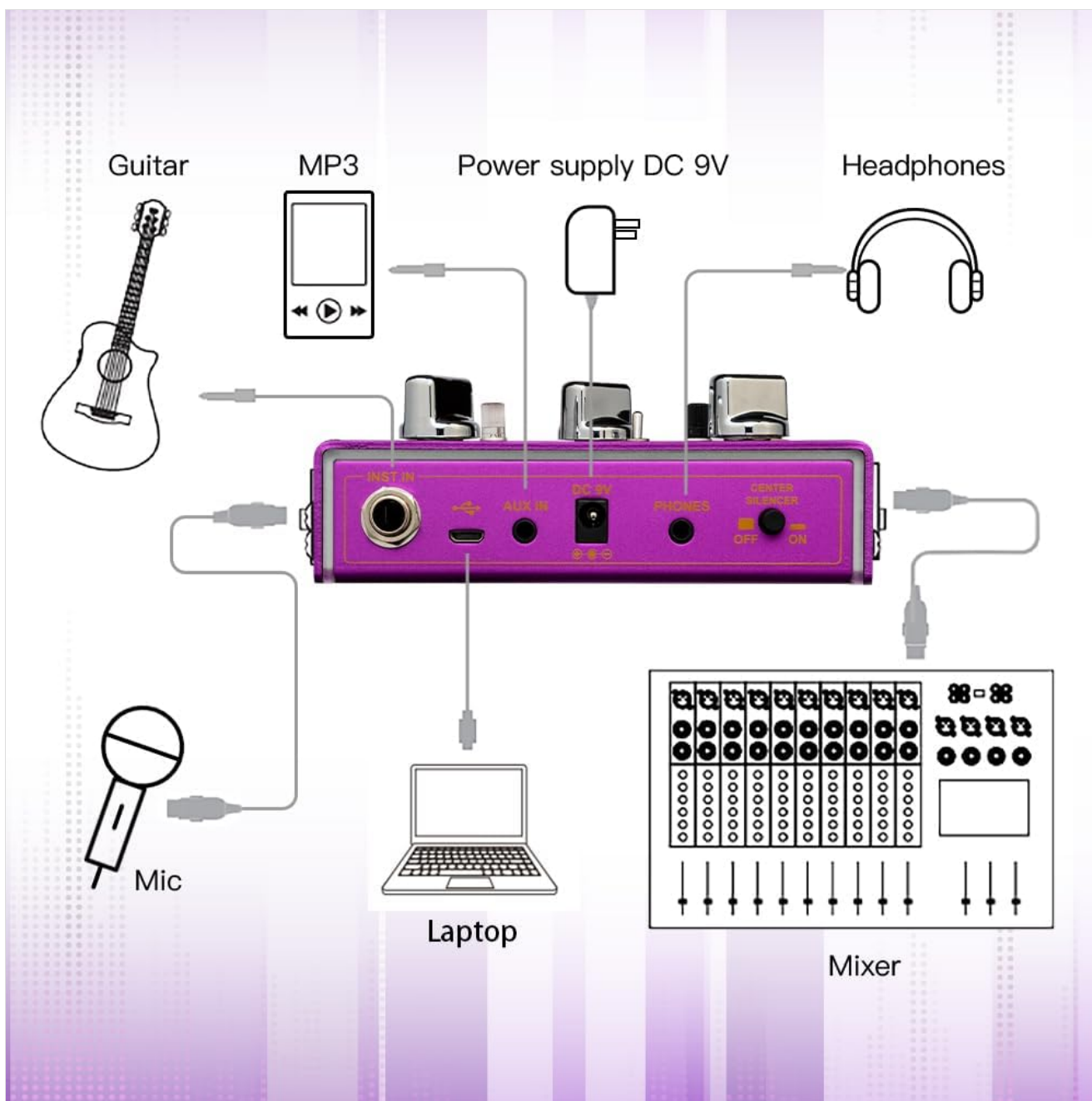


Image: Detailed view of the Vocal Lab R-16's rear panel connections.

### **INST. IN (1/4" Jack):**

Instrument input for connecting a guitar or other instrument.

**USB Port:**

For connecting to a computer (functionality may vary, refer to specific software instructions).

**AUX IN (3.5mm Jack):**

Auxiliary input for connecting external audio sources like an MP3 player or phone.

**DC 9V Power Input:**

Connect a 9V DC power adapter (center minus, 500mA minimum) here.

**PHONES (3.5mm Jack):**

Headphone output for monitoring your sound.

**CENTER SILENCER Switch (OFF/ON):**

When ON, this feature attempts to reduce or remove the center-panned vocal track from the AUX IN signal, useful for karaoke or practicing with backing tracks.

**MIC IN (XLR Jack):**

Microphone input for connecting your vocal microphone.

**MIC OUT (XLR Jack):**

Microphone output for connecting to a mixer, audio interface, or PA system.

## 5. SETUP

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Follow these steps to set up your JOYO Vocal Lab R-16 pedal:

1. **Power Connection:** Connect a compatible 9V DC (center minus, 500mA minimum) power adapter to the DC 9V input on the rear panel. Plug the adapter into a power outlet.
2. **Microphone Connection:** Connect your microphone to the MIC IN (XLR) jack. If using a condenser microphone, ensure the 48V Phantom Power switch is set to ON. For dynamic microphones, keep it OFF.
3. **Output Connection:** Connect the MIC OUT (XLR) jack to your mixer, audio interface, or PA system.
4. **Instrument Connection (Optional):** If using an instrument, connect it to the INST. IN (1/4" jack).
5. **Auxiliary Input (Optional):** Connect an external audio source (e.g., MP3 player) to the AUX IN (3.5mm jack) if desired.
6. **Headphone Connection (Optional):** For monitoring, connect headphones to the PHONES (3.5mm jack).

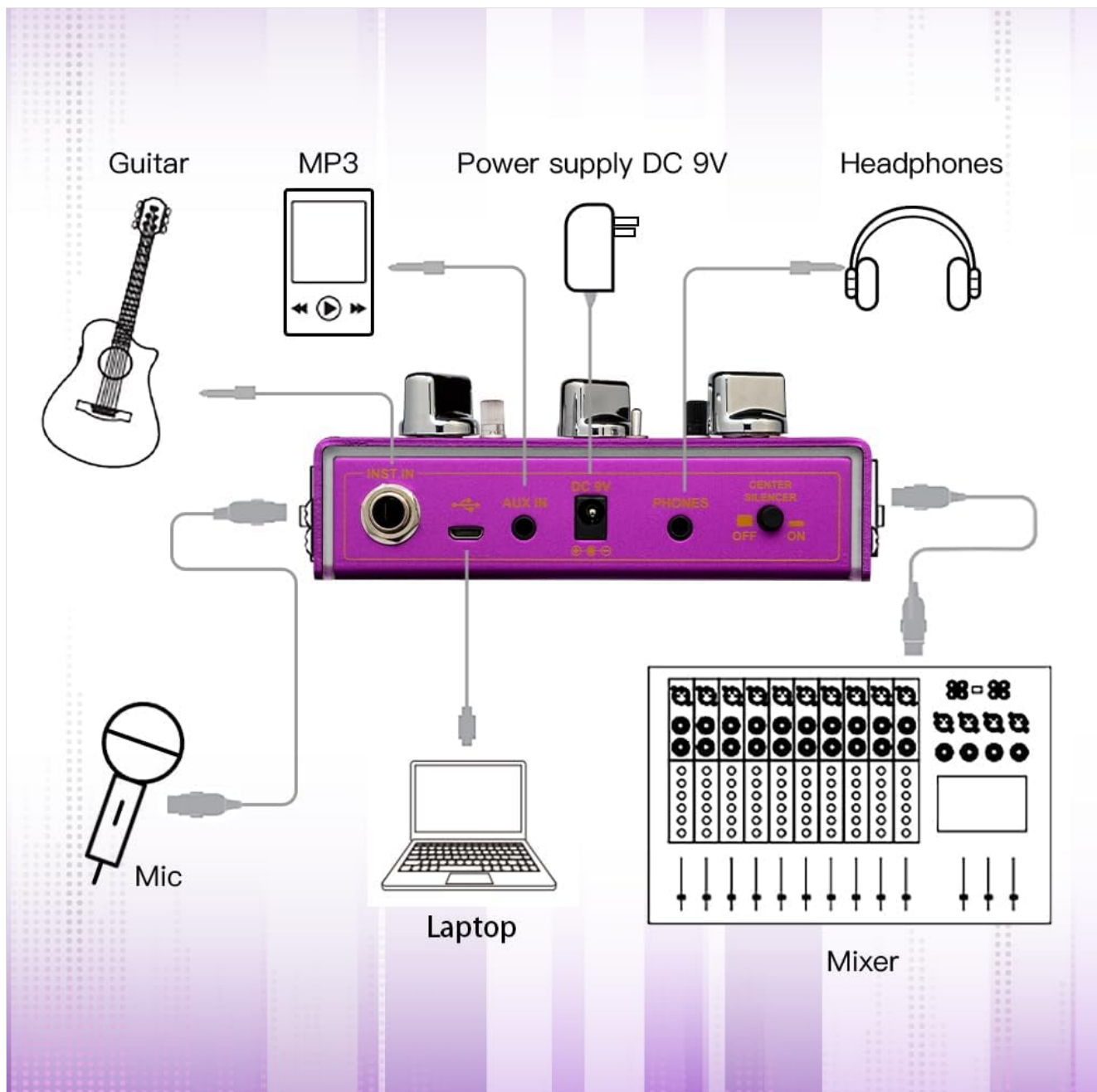


Image: Connection diagram for the Vocal Lab R-16 pedal.

## 6. OPERATING INSTRUCTIONS

1. **Power On:** Once all connections are made, ensure your power supply is active. The pedal's LEDs will illuminate.
2. **Adjust Mic Gain:** Speak into your microphone and adjust the MIC GAIN knob until the LED indicator remains green. Avoid the red indicator, which signifies clipping and distortion.
3. **Select Key:** Use the KEY SELECT knob to choose the musical key (e.g., C, D, E) that matches your song. Use the Major/Minor toggle switch to select the appropriate scale.
4. **Choose Harmony Effect:** Turn the HARMONY knob to select one of the 9 available harmony types.
5. **Adjust Harmony Mix:** Use the HAR.MIX knob to blend the harmony effect with your dry vocal signal to your preference.
6. **Engage Harmony:** Press the HARMONY footswitch to activate or bypass the harmony effect. The footswitch

LED will indicate its status.

7. **Select Reverb Model:** Turn the REVERB knob to choose between Small, Medium, or Large reverb models.
8. **Engage Reverb:** Press the REVERB footswitch to activate or bypass the reverb effect. The footswitch LED will indicate its status.
9. **Ground Lift:** If you experience hum or noise, try toggling the GND LIFT switch to eliminate ground loop issues.
10. **Center Silencer (for AUX IN):** If using the AUX IN for backing tracks and wish to reduce the original vocal track, switch the CENTER SILENCER to ON.

## 7. MAINTENANCE

- Clean the unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- Store the pedal in a dry, cool place away from direct sunlight and extreme temperatures.
- Disconnect power when the unit is not in use for extended periods.

## 8. TROUBLESHOOTING

| Problem                             | Possible Cause  | Solution   |
|-------------------------------------|---|--|
| No power / Unit not lighting up     | Incorrect or insufficient power supply; loose connection.                         | Ensure a 9V DC (center minus, 500mA minimum) power supply is used and securely connected. Try a dedicated power supply if using a multi-power brick. |
| No sound from microphone            | Mic gain too low; 48V phantom power off for condenser mic; incorrect connections. | Adjust MIC GAIN. Turn 48V switch ON for condenser mics. Check all XLR cable connections.   |
| Distorted microphone sound          | Mic gain too high.  | Reduce MIC GAIN until the LED indicator stays green.   |
| Humming or buzzing noise            | Ground loop issue.  | Toggle the GND LIFT switch. Ensure all cables are properly shielded.   |
| Harmony sounds incorrect/out of key | Incorrect key or major/minor setting.   | Verify the KEY SELECT knob and Major/Minor toggle switch match the song's key.   |

## 9. SPECIFICATIONS

- **Item Weight:** 14.7 ounces (416 Grams)
- **Product Dimensions:** 5.12 x 1.97 x 4.33 inches
- **Hardware Interface:** 1/4-inch Audio, XLR
- **Signal Format:** Analog
- **Voltage:** 9 Volts (DC)
- **Amperage:** 500 Microamps (0.5A)
- **Audio Output Effects:** Vocal Harmony, Reverb
- **Phantom Power:** 48V

# Specifications

Instrument Input Impedance:  $1M\Omega/6.35mm$

MIC Input Impedance:  $2.49K\Omega/XLR$

Headphone Output Impedance:  $32\Omega/3.5mm$

Mic Output Impedance:  $600\Omega/XLR$

Working Current: 500mA

Aux IN Impedance:  $10K\Omega/3.5mm$

Phantom power 48V

Working Voltage: DC 9V (center minus)

Item Weight: 0.92 lb/14.67 ounces



Image: Visual representation of the pedal's dimensions and key specifications.

## 10. WARRANTY AND SUPPORT

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For warranty information or technical support, please refer to the documentation included with your purchase or contact JOYO customer service through their official website or the retailer where the product was purchased. Keep your proof of purchase for warranty claims.