

D Debra ST-202

D Debra Audio PRO ST-202 UHF Stereo Wireless In-Ear Monitor System User Manual

Model: ST-202

1. INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your D Debra Audio PRO ST-202 UHF Stereo Wireless In-Ear Monitor System. This system is designed for professional audio monitoring in various applications, including stage performances, studio recording, and band practice. It features UHF band phase-locked loop (PLL) technology, offering 60 switchable frequencies for reliable wireless transmission.



Figure 1: D Debra Audio PRO ST-202 UHF Stereo Wireless In-Ear Monitor System components.

2. PACKAGE CONTENTS

Please verify that all items listed below are included in your package:

- Transmitter (1 unit)
- Bodypack Receiver (2 units)
- Earphones (2 pairs)
- Antenna (2 units)
- Antenna with Magnetic Base (2 units)
- Audio Cable (6.5mm, 2 units)
- Bracket Accessories (2 sets)
- Power Plug (1 unit)
- User Manual (1 unit)

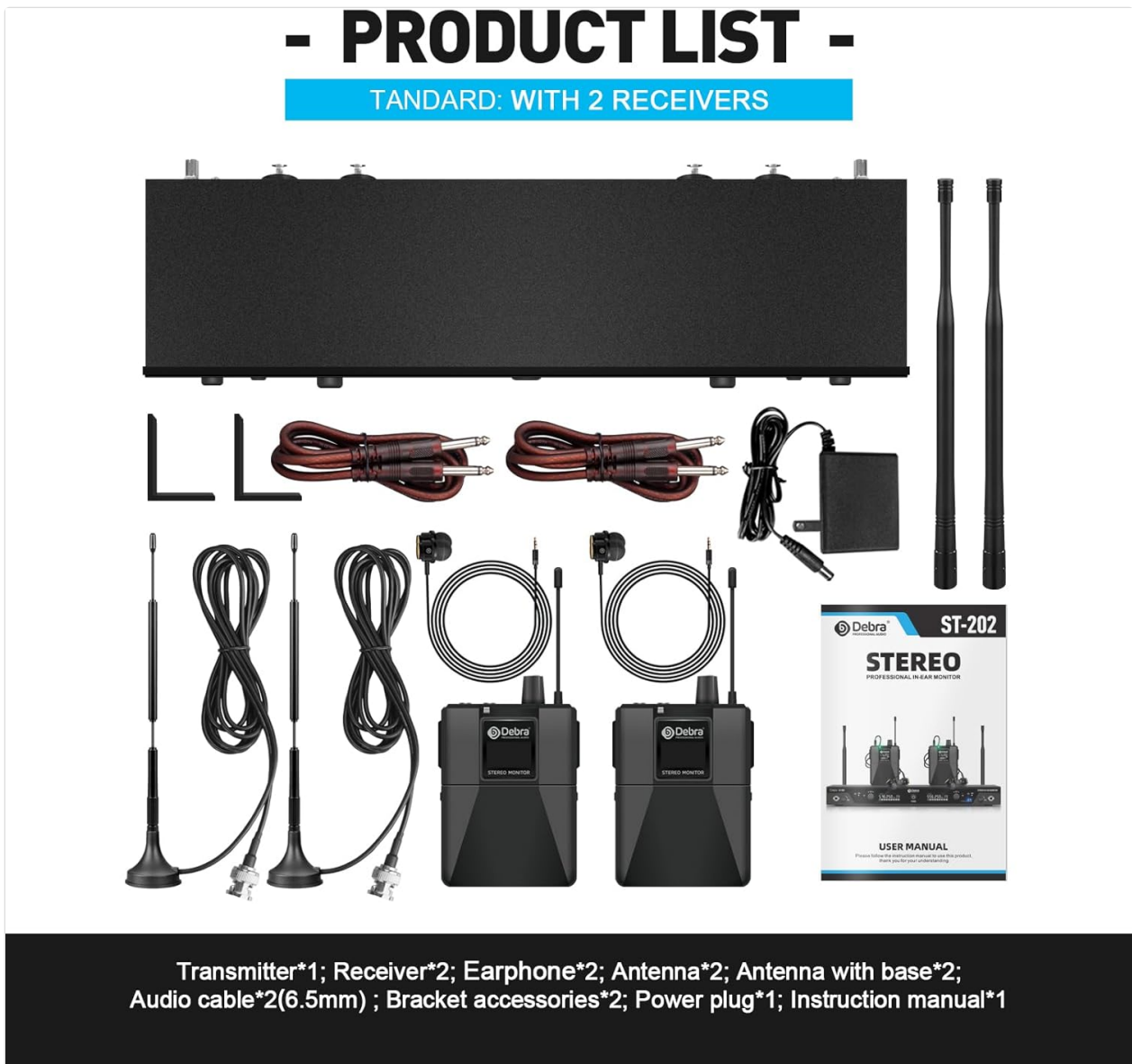


Figure 2: All included components in the product package.

3. PRODUCT OVERVIEW

3.1. Transmitter (Rack-Mount Unit)

The transmitter unit serves as the central hub for the in-ear monitor system, sending audio signals wirelessly to the bodypack receivers. It features input connections for audio sources, controls for volume and frequency selection, and an IR sensor for synchronization.

Front Panel Controls:

- **Power Button:** Turns the unit on/off.
- **SET Button:** Accesses menu options.
- **IR Sensor:** For infrared synchronization with receivers.
- **Volume Control:** Adjusts the output level.
- **Display Screen:** Shows frequency, channel, and other status information.
- **Headphone Jack (6.35mm):** For local monitoring.

Rear Panel Connections:

- **Antenna Interfaces:** Connect the included antennas.
- **XLR/6.35mm Combo Inputs:** For audio input from a mixer or other source.
- **Power Input:** Connect the DC power adapter.

3.2. Bodypack Receiver

The bodypack receiver is a portable unit that receives audio signals from the transmitter and delivers them to the connected earphones. It is powered by AA batteries.

Controls and Features:

- **Power On/Off / Volume Control:** Rotary knob for power and volume adjustment.
- **Headphone Jack (3.5mm):** Connect your earphones here.
- **IR Position:** For infrared synchronization with the transmitter.
- **Battery Compartment:** Holds two AA batteries.
- **Display Screen:** Shows frequency, channel, battery status, and monitoring mode (Stereo/Mono).
- **Switch Stereo/Mono:** Button to toggle between stereo and mono monitoring modes.

3.3. Dimensions

ST-202 WIRELESS IN-EAR MONITOR SYSTEM

SIZE/ PARAMETERS



SYSTEM TECHNICAL PARAMETERS

Carrier frequency range: 560-590Mhz/640-664.75Mhz
Audio sampling depth: 24bit, 44.1k
Signal delay: 7ms
Number of wireless channels: 100
Modulation method: GFSK
Audio Frequency Response: 20~18000 Hz
Comprehensive T.H.D.: <0.1%
Separation: 75dB
Audio SNR: 85dB
Dynamic range: 95dB
Effective use distance: 80 meters (open environment)

TRANSMITTER TECHNICAL PARAMETERS

Frequency error: <=10ppm
Transmission power: 10mW
Use current: 160mA
Power supply mode: 12V 500mA
Audio input: 3.5mm/6.5mm/XLR

RECEIVER TECHNICAL PARAMETERS

Frequency error: <=10ppm
Receiving sensitivity: <-95dBm
Power supply mode: 2xAA batteries
Use current: 130mA
Audio output: 1 stereo headphone output, 1 audio output

Figure 3: Physical dimensions of the system components.

4. SETUP

4.1. Transmitter Setup

- 1. Connect Antennas:** Screw the two included antennas onto the antenna interfaces on the rear panel of the transmitter. For optimal reception, use the magnetic chassis external extension antennas and position them freely.
- 2. Connect Audio Input:** Connect your audio source (e.g., mixing console, audio interface) to the XLR or 6.35mm combo inputs on the rear of the transmitter using appropriate audio cables.
- 3. Connect Power:** Plug the power adapter into the DC power input on the rear of the transmitter, then connect it to a power outlet.
- 4. Power On:** Press the power button on the front panel to turn on the transmitter.



Figure 4: External antenna connection for enhanced signal reception.

4.2. Receiver Setup

1. **Install Batteries:** Open the battery compartment on the bodypack receiver and insert two AA batteries, ensuring correct polarity.
2. **Connect Earphones:** Plug your earphones into the 3.5mm headphone jack on the bodypack receiver.
3. **Power On:** Rotate the power/volume knob clockwise to turn on the receiver.

4.3. Frequency Synchronization (IR Sync)

To establish a wireless connection between the transmitter and receiver, you must synchronize their frequencies:

1. On the transmitter, select the desired frequency/channel using the controls. The system offers 60 preset frequencies in the 560-590MHz band.
2. Open the battery cover of the bodypack receiver to expose its IR sensor.
3. Align the IR sensor on the bodypack receiver with the IR sensor on the transmitter (usually indicated by an 'IR' label). Ensure they are within close proximity (a few centimeters).
4. Press the 'SET' or 'IR Sync' button on the transmitter (refer to the transmitter's specific button layout if different). The display on both units should indicate successful synchronization.

COMPATIBLE DEVICE



Sound console



Wireless microphone



Sound card



Pre-effector



Earphone



Digital amplifier

ST-202 APPLICATION



BAR PERFORMANCE



STAGE PERFORMANCE



STUDIO RECORDING



MUSIC PRACTICE

Figure 5: Infrared synchronization for channel matching.

5. OPERATING INSTRUCTIONS

5.1. Power On/Off

- **Transmitter:** Press the power button on the front panel.
- **Receiver:** Rotate the power/volume knob clockwise to turn on. Rotate counter-clockwise until it clicks to turn off.

5.2. Channel Selection

The system operates in the UHF band (560-590MHz) with 60 preset frequencies. Use the 'SET' button and navigation controls on the transmitter to select an available channel. Ensure the selected channel is clear of interference.

5.3. Monitoring Mode (Stereo/Mono)

The bodypack receiver supports both stereo and mono monitoring modes. You can switch between these modes directly on the receiver:

- Locate the 'Stereo/Mono' switch or button on the bodypack receiver.
- Press or toggle the switch to select your desired mode. Stereo mode provides a wider soundstage, while mono mode combines left and right channels into a single signal, often preferred for vocal monitoring.

MODE SELECTION

Users can freely switch the monitoring mode from the transmitter or receiver.

Prioritize transmitter mode



Figure 6: Switching between Stereo and Mono monitoring modes.

5.4. Volume Adjustment

- **Transmitter:** Use the volume knob on the front panel to adjust the overall output level sent to the receivers.
- **Receiver:** Use the power/volume knob on the bodypack receiver to adjust your personal monitoring volume.

5.5. Operating Range

The system offers a wireless transmission range of approximately 80 meters (262 feet) in typical environments. In open environments with minimal obstructions, the range can extend up to 300 meters. Optimal performance is achieved when the line of sight between the transmitter and receiver is maintained.

**ULTRA-LONG
SIGNAL RANGE RECEPTION**

**80^m
RANGE**

Signal range reception up to 180m

262ft

Within a range of 80 meters (262 feet), the signal transmission is very stable, and the signal range that can be transmitted is wider in an open environment.

Figure 7: Wireless signal range capabilities.

6. TROUBLESHOOTING

If you encounter issues with your ST-202 system, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No sound from receiver	<ul style="list-style-type: none"> Receiver not powered on. Low/dead batteries in receiver. Earphones not connected or faulty. Transmitter not powered on. No audio input to transmitter. Frequency mismatch. 	<ul style="list-style-type: none"> Ensure receiver is powered on. Replace AA batteries in receiver. Check earphone connection and test with another pair. Ensure transmitter is powered on. Verify audio source is connected and sending signal to transmitter. Perform IR synchronization to match frequencies.

Problem	Possible Cause	Solution
Interference or dropouts	<ul style="list-style-type: none"> • Other wireless devices on the same frequency. • Obstructions between transmitter and receiver. • Operating outside effective range. • Weak signal due to antenna placement. 	<ul style="list-style-type: none"> • Select a different frequency/channel on the transmitter and re-sync receivers. • Ensure clear line of sight between transmitter and receiver. • Reduce distance between units. • Adjust antenna position for optimal reception.
Short battery life in receiver	<ul style="list-style-type: none"> • Using low-quality or old batteries. • High volume settings. 	<ul style="list-style-type: none"> • Use fresh, high-quality alkaline or rechargeable AA batteries. • Reduce receiver volume if excessively high.
Poor audio quality	<ul style="list-style-type: none"> • Low-quality earphones. • Incorrect input levels to transmitter. • Interference. 	<ul style="list-style-type: none"> • Consider using higher quality in-ear monitors. • Adjust input gain on the transmitter to avoid clipping or low signal. • Check for and resolve interference issues.

7. SPECIFICATIONS

The following are the technical specifications for the D Debra Audio PRO ST-202 UHF Stereo Wireless In-Ear Monitor System:

Feature	Specification
Model Name	DB-01 (System), ST-202 (Transmitter)
Connectivity Technology	Wireless (UHF)
Wireless Communication Technology	Infrared (for sync)
Frequency Range	560-590 MHz
Number of Wireless Channels	60 (preset)
Audio Sampling Depth	24bit, 44.1K
Signal Delay	7ms
Audio Frequency Response	20-18000 Hz
Signal-to-Noise Ratio (SNR)	95dB
Dynamic Range	95dB
Effective Use Distance	80 meters (open environment up to 300 meters)
Transmitter Power Supply	12V 500mA

Feature	Specification
Receiver Power Supply	2x AA batteries
Transmitter Audio Input	3.5mm/6.5mm/XLR
Receiver Audio Output	1 stereo headphone output, 1 audio output
Material	Metal
Item Weight	2.68 Kilograms (5.89 pounds)

8. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your in-ear monitor system:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the transmitter and receivers. Avoid using liquid cleaners or solvents, as they may damage the finish or internal components.
- **Storage:** When not in use, store the system in a cool, dry place, away from direct sunlight and extreme temperatures. If storing for extended periods, remove batteries from the bodypack receivers to prevent leakage.
- **Antennas:** Handle antennas with care. Ensure they are securely connected but do not overtighten.
- **Earphones:** Clean earphones regularly according to their manufacturer's instructions to maintain hygiene and sound quality.

9. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation included with your purchase or visit the official D Debra Audio website. You may also contact the seller directly for assistance.

Visit the [D Debra Store on Amazon](#) for more products and information.