



PTAU-2

Advanced True Diversity
Dual-Channel Wireless Microphone System



USER MANUAL

IMPORTANT SAFETY INSTRUCTIONS

1. Read and follow these instructions carefully.
2. Only use attachments, accessories, and spare parts specified by the manufacturer.
3. Avoid exposing the product and its connections to liquids and electrically conductive objects that are not essential for its operation.
4. Do not operate near any heat sources, such as open flames, radiators, or other apparatus that produce heat.
5. Keep the power cord safe by preventing it from being walked on or pinched, especially at the plugs.
6. Do not use the apparatus during lightning storms, and unplug it when unused for a long period of time.
7. Any modifications not approved by the manufacturer for the product could result in personal injury or product failure.
8. Operate this product within its proper operating temperature range.



Caution: This symbol indicates the unit might have a risk of electric shock.



Caution: This symbol is used to alert you to potential personal injury hazards. Obey all safety messages with this symbol to avoid possible injury or death.



Caution: This symbol indicates possible risk of electric shock within the unit.



Caution: This symbol means the product must not be discarded as household waste, and should be delivered to an appropriate collection facility for recycling. Proper disposal and recycling helps protect natural resources, human health and environment. For more information on disposal and recycling of this product, contact your local municipality, disposal service, or shop where you bought this product.

IMPORTANT PRODUCT INFORMATION

Licensing: A ministerial license may be required to operate this equipment in certain areas. Consult your national authority for possible requirements. Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment. Licensing of PHENYX PRO wireless microphone equipment is the user's responsibility, and licensability depends on the user's classification and application, and on the selected frequency. PHENYX PRO strongly urges the user to contact the appropriate telecommunications authority concerning proper licensing, and before choosing and ordering frequencies.

FCC Information

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

*NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

IC Statement

This device contains license-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The term "IC" before the certification/registration number only signifies that the Industry Canada technical specifications were met. This product meets the applicable Industry Canada technical specifications.

Cet appareil contient des émetteurs/récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with ISSED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body

Cet équipement est conforme aux limites d'exposition aux rayonnements ISSED établies pour un environnement non contrôlé.

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps

Industry Canada ICES-003 Compliance
Label: CAN ICES-3 (B)/NMB-3(B)

EU Directives



This product meets the Essential Requirement of all relevant European directives and is eligible for CE marking.

Meets essential requirements of the following European Directives:

WEEE Directive 2019/19/EU

RoHS Directive EU 2015/863

Note: Please follow your regional recycling scheme for batteries and electronic waste

Authorized European Representative



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Thank you for purchasing the Phenyx Pro PTAU-2. For the best results and utmost satisfaction with your new unit, please read this manual carefully to ensure proper operation, and keep it for future reference. For more information, please visit our store: www.phenyxpro.com

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System Description

System overview

Discover the Phenyx Pro PTAU-2 system and experience the joy of effortless control with the system's precise shuttle jog dial. This feature strips away the complexity of traditional multi-button setups, allowing you to navigate functionalities with a intuitive twist. It's not just about control—it's about enjoying every moment at the helm of your audio experience. Beyond the interactive operation, the PTAU-2 is engineered to excel in the most challenging environments. Equipped with robust features that ensure reliable performance, this system navigates complex audio landscapes with precision. Whether it's a bustling outdoor event or a high-stakes conference, the PTAU-2 provides the tool you need to deliver flawless sound without compromise. Perfect for those who demand precision and want to transform their sound experience.

System features

- **Shuttle Jog Dial Control:** The innovative shuttle jog dial integrates multiple powerful functions in a single wireless microphone system without the clutter of traditional multi-button designs. This intuitive control streamlines the front panel, making it cleaner and more organized. With a single twist, you can access all functionalities, ensuring quicker, more accurate selections without the hassle of repeated button presses—ideal for fast-paced environments.
- **ID Lock Function:** Ensure audio transmission stability and security during performances or speeches with the advanced ID Lock function. This feature locks the selected frequency, allowing only the matched handheld mic to transmit audio, preventing simultaneous output from other wireless microphone systems on the same frequency.
- **Adjustable Transmitter Power:** Adapt to any environment with selectable transmitter power settings (5mW/10mW/30mW). Increase power to extend transmission distance and overcome electromagnetic interference, or reduce it to minimize disruptions to surrounding devices and conserve battery life—a versatile solution for every scenario.
- **Adjustable Receiver Sensitivity:** Tailor receiver sensitivity with three settings (High, Mid, Low) to match environmental needs and microphone placement. This flexibility ensures optimal reception across a range of conditions, from large outdoor events to intimate indoor gatherings.
- **Spectrum Analyzer:** Efficiently pair devices and manage multiple systems with the built-in spectrum analyzer. It clearly identifies frequency bands with interference, allowing users to find cleaner channels when using multiple wireless microphone systems. This feature is especially useful in crowded environments with numerous wireless devices.
- **Auto Frequency Scan:** Simplify frequency management with the auto-scan feature that detects and avoids busy channels and external interferences, supporting up to 2x1000 selectable frequencies. This helps to eliminate cross-channel interference, ensuring a clear and stable connection.
- **True Diversity Technology:** Experience superior sound quality and reliable long-distance transmission with our True Diversity technology. This advanced technology minimizes reception dead zones and noise issues, providing stable signals and high adaptability to environmental interference, with an impressive range of up to 300ft-328ft—even through walls.
- **Exceptional Audio Quality:** Capture every nuance with our specially designed microphone capsule and specially tuned EQ. These features ensure rich, clear, and bright vocal reproduction, meeting the highest standards of sound quality and aesthetic demands.

System components

Your system comes with a combination of the following components.

Receiver

1 x Dual-channel Wireless Receiver

Transmitter

2 x Handheld Transmitters

Accessories

1 x 1/4" Audio Cable

4 x Antennas

4 x AA Batteries

1 x Power Adapter

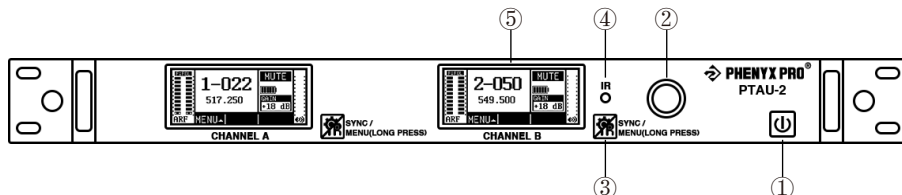
1 x 6.35MM to 3.5MM Adapter

1 x User Manual

Functions of Parts

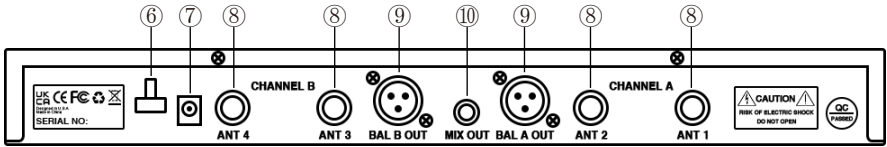
Receiver

Front panel

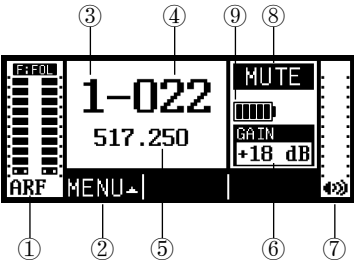


- ① **Power button:** Powers on/off the unit. It lights blue when the unit is on.
- ② **Shuttle jog dial control:** Twist it to access all functionalities.
- ③ **SYNC/MENU button:** Short press to activate SYNC for infrared synchronization setup.
Long press to activate MENU for function selections.
- ④ **IR window:** For infrared synchronization setup.
- ⑤ **LCD screen:** Displays the receiver status.

Rear panel



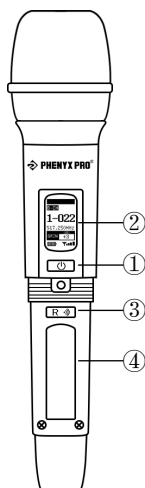
- ⑥ **Adapter cord tie-off:** For cable management.
- ⑦ **Power jack**
- ⑧ **Antenna jacks**
- ⑨ **Balanced XLR output jacks:** The XLR audio output jacks accept a balanced XLR connector. Each channel has its corresponding XLR output jack.
- ⑩ **1/4" mixed output jack:** The 1/4" (6.35mm) output jack accepts an unbalanced TS connector.



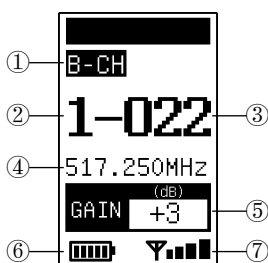
Receiver LCD Screen

- ① **RF signal indicator:** Indicates the strength of the radio frequency signal received by the receiver.
- ② **Menu:** Long press the SYNC/MENU Button to access the function menu.
- ③ **Group number**
- ④ **Frequency channel number**
- ⑤ **Frequency number**
- ⑥ **Gain indicator:** Shows the strength of the output signal of the receiver.
- ⑦ **AF signal indicator:** Shows the strength of the audio signal received from the transmitter.
- ⑧ **Mute indicator:** The “MUTE” appears on the screen to indicate the transmitter and receiver are not paired or the transmitter is muted.
- ⑨ **Battery indicator:** Indicates the real-time battery status of the transmitter.

Transmitter

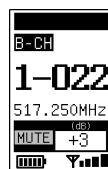


- ① **Power button:** Short press to turn it on and long press to turn it off. When the transmitter is powered on, short press the power button to mute it.
- ② **LCD screen**
- ③ **IR window:** For infrared synchronization setup.
- ④ **Battery compartment:** Install batteries with the correct polarity.



Transmitter LCD Screen

- ① **Transmitter channel number**
- ② **Group number**
- ③ **Frequency channel number**
- ④ **Frequency number**
- ⑤ **Gain indicator:** Indicates the output audio signal level of the transmitter. When the transmitter is muted, a flashing MUTE icon will appear.

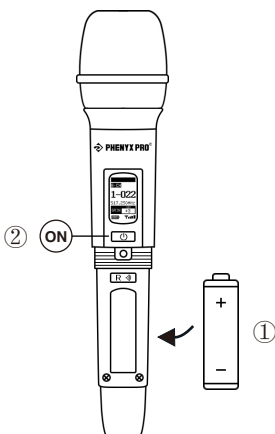


⑤

- ⑥ **Battery indicator:** Indicates the real-time battery status of the transmitter.
- ⑦ **Transmitter power signal:** Indicates the transmission power (with three selectable power levels: 5mW, 10mW, and 30mW).

Step 2: Turn on transmitters

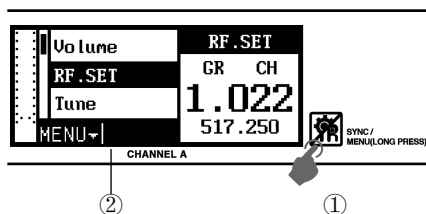
- ① Install fresh batteries with the correct polarity.
- ② Short press power buttons to turn on transmitters.



Step 3: Select desired frequency

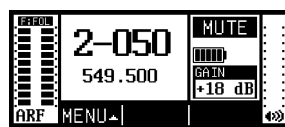
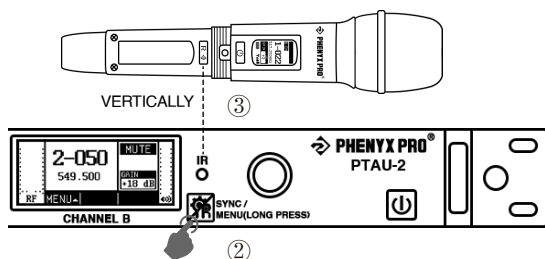
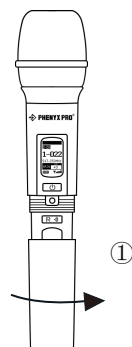
- ① Long press the SYNC/MENU Button of channel A or B to access the function menu of each channel.
- ② Choose the RF. SET and TUNE functions to select the frequency manually, or use the Scan function to search and select frequencies automatically.

***NOTE:** For detailed operating steps, please refer to the receiver menu section below.



Step 4: Pair up the receiver and transmitters

- ① Unscrew the battery compartment.
- ② Short press the SYNC Button on the receiver to initiate the IR synchronization.
- ③ Vertically aim the IR window of a transmitter to that of the receiver.
- ④ After the successful synchronization, the receiver shows the RF signal on the screen and the receiver and the transmitter shows the same frequency number.



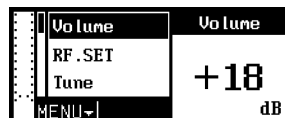
Receiver menu

Long press the SYNC/MENU Button of channel A or B to access the function menu of each channel. Once in the menu, twist the jog wheel to cycle through the functions.

1 - Volume

The Volume function is used to adjust the output signal of the receiver. The adjustment range is from -30 to +18 dB.

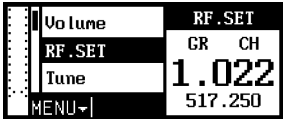
- ① Tap the jog wheel to enter the Volume function menu.
- ② Twist the jog wheel counterclockwise/clockwise to decrease/increase the volume.
- ③ Tap the jog wheel again to store the desired volume setting.



2 - RF. SET

The RF SET function is used to select frequency group. Each group has 100 available frequency channels.

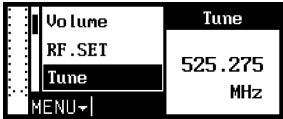
- ① Tap the jog wheel to enter the RF. SET function menu.
- ② Twist the jog wheel to select your desired frequency channel.
- ③ Tap the jog wheel again to store it.
- ④ Short press the SYNC Button on the receiver to initiate the IR synchronization.



3 - Tune

The Tune function is used to set the specific frequency. Each receiver channel offers 1,000 available frequencies.

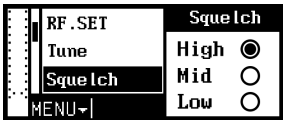
- ① Tap the jog wheel to enter the Tune function menu.
- ② Twist the jog wheel to choose the desired number before the decimal point and press the jog wheel to confirm it.
- ③ Twist the jog wheel to choose the desired number after the decimal point and press the jog wheel again to store the selected frequency.
- ④ Short press the SYNC Button on the receiver to initiate the IR synchronization.



4 - Squelch

The Squelch function adjusts the receiver's signal reception sensitivity. It offers three sensitivity levels: High, Mid, and Low. Choose higher sensitivity level for spacious venues or large outdoor events and choose lower sensitivity level for small stages or indoor presentations.

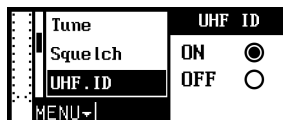
- ① Tap the jog wheel to enter the Squelch function menu.
- ② Twist the jog wheel to select from three receiver sensitivity levels.
- ③ Tap the jog wheel again to store the desired receiver sensitivity level.



5 - ID Lock

When the ID Lock function is enabled, it locks the selected channel to prevent other handheld microphones on the same frequency from transmitting sound. Only the handheld microphone paired with the main unit will be able to transmit audio. Ensures priority for specific frequencies and maximizes interference prevention.

- ① Tap the jog wheel to enter the ID Lock function menu.
- ② Twist the jog wheel to cycle through ON/OFF (select ON to lock the ID, or OFF to leave the ID unlocked).
- ③ Press the jog wheel to select ON/OFF (the selected option will flash).
- ④ Press the jog wheel again to store ON/OFF.



6 - Auto Scan

The Autoscan function automatically scans frequencies, skipping those that are currently in use and those with external interference, selecting the cleanest channel available.

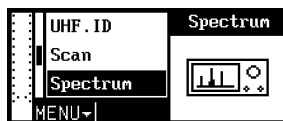
- ① Tap the jog wheel to enter the AutoScan function menu.
- ② Tap the jog wheel again to start the search for the best frequency.
- ③ Wait until the new frequency appears on the screen.
- ④ Short press the SYNC Button on the receiver to initiate the IR synchronization.



7 - Spectrum Analysis

The Spectrum Analysis function is used to analyze and display the signal conditions in current RF environment. It helps users identify clean frequency bands, avoiding interference. It can also assist other wireless microphone systems in choosing the cleanest frequency bands.

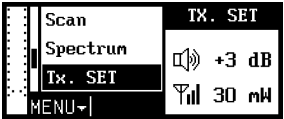
- ① Tap the jog wheel to initiate the spectrum analysis.
- ② After the scan is finished, a spectrum analysis graph will appear on the screen.
- ③ Twist the jog wheel to identify clean frequencies for optimal performance.



8 - Tx. SET

The Tx. SET function is used to adjust the transmitter's gain (selectable range: 0-9) and transmission power (with three selectable power levels: 5mW, 10mW, and 30mW). In long-distance or high-interference environments, increasing transmission power ensures stable audio delivery. In close-range or low-interference settings, reducing transmission power minimizes interference and extends battery life.

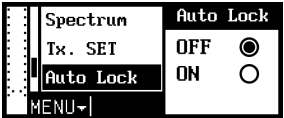
- ① Tap the jog wheel enter the Tx. SET function menu.
- ② Twist the jog wheel to select the desired gain of the transmitter and tap the jog wheel to confirm it.
- ③ Twist the jog wheel to select transmitter power and tap the jog wheel to store the Tx. SET.



9 - Auto Lock

Enable this function to lock all the function settings.

- ① Tap the jog wheel to enter the Auto Lock function menu.
- ② Twist the jog wheel to cycle through ON/OFF (select ON to lock all the settings, or OFF to leave all the settings unlocked).
- ③ Press the jog wheel to store ON/OFF.



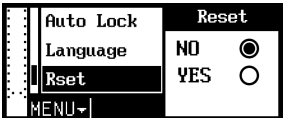
10 - Language

Shows the language used by this wireless microphone system.

11 - Reset

Use this function to reset all configured settings.

- ① Tap the jog wheel to enter the Reset function menu.
- ② Twist the jog wheel to cycle through YES/NO (Selecting "yes" will reset all settings).
- ③ Press the jog wheel to store ON/OFF.



12 - Version

Shows the version of this wireless microphone system.

13 - Exit

Return to the home screen.

Troubleshooting

Problem	Solution
Short receiving distance	• Place the receiver at least 120 cm above the ground, ideally at the top of a rack. If the receiver is installed in a case, extend the antennas outside to enhance signal reception. • Reset the receiver frequency to be about 30 frequencies apart from the original one, then re-pair. • If a single channel experiences a dropout, adjust the frequency according to the environment and re-pair. For example, if Channel A experiences a dropout and the environment has low-frequency interference, set Channel A to the highest frequency and then re-pair.
The receiver indicates RF and AF signals, but no sound is heard	• Check if the receiver's volume is at a proper level. • Check if the volume of amplifier/speaker connected with the receiver is at a proper level. • Check if the handheld transmitter's volume is at a proper level.
The receiver doesn't indicate RF and AF signals, no sound is heard	• Swap the handheld microphones of channels A and B and re-pair them to test whether the issue lies with the receiver's channel circuit board or the handheld microphone's circuit board. (Ensure the receiver is in an unlocked state).

Specification

• Overall System

Frequency Range	512-562 MHz
Modulation Mode	FM
Available Bandwidth	25 KHz per channel
Number of Frequencies	2 x 1000
Frequency Stability	$\pm 0.005\%$
Dynamic Range	>110 dB
Peak Deviation	± 45 KHz
Frequency Response	60 Hz-18 KHz (± 3 dB)
S/N Ratio	>105 dB
Total Harmonic Distortion	<0.5%

• Receiver

IF Frequency	110 MHz (1st), 10.7 MHz (2nd)
Antenna Connector	BNC
Sensitivity	12 dB μ V (80 dBs/N)
Quieting Sensitivity	-40 dB
Image Rejection	>80 dB
Output Level	Unbalanced: +4 dB (1.25 V)/5 k Ω ; Balanced: +10 dB (2.5 V)/600 Ω
Power Requirement	DC: 11-16 V (rated 12 V), Current: <200 mA (single receiver), <350 mA (dual receiver)

• Transmitter

Output Power	5 - 30mW (depends on specific setting)
Current Consumption	<110 mA (HF), <80 mA (LF)
Battery Life	≥ 8 hours (AA alkaline battery)

• Frequency List

Channel 1: 512-536 MHz	Each channel has 1000 frequencies with 0.025 MHz increment.
Channel 2: 537-562 MHz	

Technical Support & Warranty Information

Our warranty to you:

Phenyx Technology ("Phenyx") warrants Phenyx products against evident defects in material and workmanship for a period of one year from the date of original purchase for use. This warranty is valid exclusively in the US and applies only to the original owner. If you discover a defect covered by this warranty, Phenyx will repair or replace the product at our sole discretion using new or refurbished components. Performance of repairs or replacements under this warranty is subject to registration of your product at www.phenyxpro.com

Product failures not covered by this warranty:

This warranty covers defects in manufacturing that arise from the correct use of the device. It is limited to defects in materials or workmanship and does not cover electrical or mechanical damage resulting from abuse, misuse, unauthorized modification, lack of reasonable care, extreme heat, cold, damage due to natural forces, or corrosive environments. This warranty does not cover the normal wear and tear on covers, housing, connectors, and accessories.

Limits of liability:

If your Phenyx product fails or does not perform as warranted, your sole recourse shall be to replace or repair it as described above. Phenyx will not be liable to you or anyone else for any damages that result from the failure of this product. These damages include, but are not limited to, the following: lost profits, lost savings, lost data, damage to other equipment, and incidental or consequential damages arising from the use of or inability to use this product. IN NO EVENT PHENYX SHALL BE LIABLE FOR MORE THAN THE AMOUNT OF YOUR PURCHASE PRICE, NOT TO EXCEED THE CURRENT LIST PRICE OF THE PRODUCT.

How to obtain service under this warranty:

If you are receiving a system that is defective or you have any questions regarding operation or warranty cover, please contact us at support@phenyxpro.com with any questions or concerns and a Phenyx Pro representative will contact you to provide assistance. You can also reach out to us through Facebook page: www.facebook.com/phenyxusa/ or our official website: www.phenyxpro.com.

