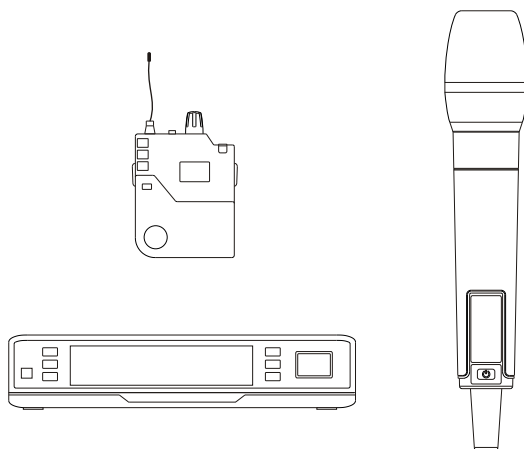




**PROFESSIONAL DUAL-CHANNEL UHF
WIRELESS SYSTEM WITH 1200
ADJUSTABLE FREQUENCIES**

AWM6548U OWNER'S MANUAL



Thank you for purchasing the **Audio2000's®** professional dual-channel UHF wireless system with 1200 adjustable frequencies! For the best results and the utmost satisfaction from your new unit, please read this manual thoroughly, and retain it for future reference.

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WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

PRECAUTIONS

On Safety

- * Operate only on designated AC power supply (120V AC in North America).
- * Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

- * Unplug the unit from the wall outlet or set the Master switch to OFF if it is not to be used for several days.
- * To disconnect the cord, pull it out by the plug. Never pull the cord itself.

On Installation

- * Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- * Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On Repackaging

Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it as it was originally packed at the factory.

PACKAGE CONTENTS

<u>Items</u>	<u>Quantities</u>
AWR6548U Receiver	1
Wireless Transmitters (AWX6548's)	2
Two Handhelds	
or	
Two Body Packs	
or	
One Handheld + One Body Pack	
AC/DC Adaptor	1
Antennas	2
¼" to ¼" Cable	1
AA Batteries	4
Owner's Manual	1

QUICK SETUP

A. Remove packing material

B. Install the AWR6548U receiver

1. Place the AWR6548U receiver at a location at least 3.5 feet (1 meter) away from the ground and all the walls. Also, keep the AWR6548U receiver away from any electro-magnetic noise sources as far as possible.
2. Mount both the antennas onto the left and right TNC antenna jacks. Make sure that any of the antennas is not enclosed in a large metal body.
3. Plug the supplied AC/DC adaptor 12VDC output connector to the AWR6548U receiver's DC input, and then plug the AC input of the adaptor to a 120V AC outlet (North America).
4. Connect the outputs of the AWR6548U receiver to microphone inputs of a mixer or a sound system. In order to do so, (1) you could use the supplied microphone cable (a cable with $\frac{1}{4}$ " connectors on both ends) to connect from the unbalanced output (an $\frac{1}{4}$ " jack) to an $\frac{1}{4}$ " microphone input on a mixer or a sound system; or (2) you could get two balanced microphone cables (cables with a male XLR connector at one end and a female XLR connector on the other end; not included in the package) to connect from both the balanced outputs (male XLR jacks) to two balanced microphone inputs (female XLR jacks) on a mixer or a sound system.
5. When the $\frac{1}{4}$ " output on the rear panel of the AWR6548U receiver is connected to an AUX-IN of a mixer or a guitar input, set the H/L switch to "H". Otherwise, set the H/L switch to "L". **The XLR balanced outputs on the rear panel of the AWR6548U receiver are to be connected to microphone inputs only.**
6. Turn both audio level adjustment knobs all the way to the minimal audio position. Press the power On/Off button steadily until the AWR6548U receiver power is turned on. After the receiver is turned on, the LCD on the front panel will display the current state of the system. (**Note:** The audio level adjustment knobs will be adjusted to its optimal position after the transmitters are turned on as discussed in the following section.)

C. Set up the transmitters

(a) Set up the handheld transmitter

1. Open the battery cover of the handheld transmitter by rotating the cover counterclockwise.
2. Then, carefully slide the battery cover out.
3. Place two 1.5V AA batteries into the battery housing with the battery polarity orientations as indicated. (NOTE: To place the AA batteries into the battery housing, insert one AA battery at a time through the upper portion, the portion closer to the microphone windscreen, of the battery housing with the positive polarity of the AA battery facing the direction away from the microphone windscreen. Refer to page 10 for the handheld microphone illustrations)
4. Carefully align the “LCD Display Window” (refer to numeral 29 on page 10) to the LCD display (refer to numeral 23 on page 10) and slide the battery cover back onto the handheld microphone body. Once the battery cover has been moved all the way back, rotate the battery cover clockwise to secure the battery cover to the handheld microphone body.
5. Turn on the power of the handheld transmitter. The LCD will be on and display the frequency, the mute icon, and the battery level.

(b) Set up the body-pack transmitter

1. Open the battery cover of the body-pack transmitter by pushing the latch button (refer to numeral 44 on pages 11 and 12) and sliding the cover in the direction away from the LCD display (refer to numeral 45 on pages 11 and 12).
2. Place two 1.5V AA batteries into the battery housing with the battery polarity orientations as indicated.
3. Slide the cover in the direction toward the LCD display to close the battery cover. Plug the supplied headset or lavalier microphone into the microphone input on the body-pack transmitter.
4. Turn on the power of the body-pack transmitter. The LCD will display the current state.

D. Setting up the AWM6548U system

1. Adjust the volume control knobs on the AWR6548U to the maximum position and adjust the mixer or the sound system, which is connected to the AWR6548U microphone outputs, to have an optimal sound level. If the sound seems to be abnormal, it may be caused by the overdriven inputs of the mixer or the sound system. Turn the MICROPHONE OUTPUT “H/L” SWITCH (Refer to numeral 12 on pages 7 and 8) from the “H” position to the “L” position if the mixed $\frac{1}{4}$ ” output is used. If the balanced XLR outputs are used, adjust the volume control knobs on the AWR6548U to a lower level until the abnormal sound quality is removed. The AWM6548U is now ready.
2. If more than one AWM6548U systems are to be used at the same time and the same location, the frequencies of the AWM6548U systems other than the first one need to be adjusted to be different from one another to avoid frequency interference. Refer to the frequency adjustment details in the OPERATION sections as follows:

Frequency Adjustment (for the AWR6548U receiver, page 13)

Squelch Adjustment (for the AWR6548U receiver, page 14)

Frequency Scan (for the AWR6548U receiver, page 16)

Frequency Tuning (for the AWR6548U receiver, page 18)

Infrared Frequency Matching (for the AWM6548U system, page 18)

Channel Adjustment (for the AWX6548U transmitter, page 20)

Frequency Adjustment (for the AWX6548U transmitter, page 20)

AWM6548U SYSTEM

FEATURES

1. UHF Band Frequencies
2. Including Two Wireless Transmitters (Comprising Combinations of Handheld Microphones, Lavalier Microphones, Headset Microphones and/or the Guitar transmitters)
3. Agile Frequencies with PLL (Phase-Lock Loop) 100 Adjustable Frequencies (Total 1200 Frequencies to be Fine Tuned)
4. Microcontroller (CPU) Controlled
5. LCD Display
6. Integrated Antenna for Effective RF Output and High Transmission Quality
7. Automatic Synchronizing the Receiver and Transmitter Frequency through Infrared Signal
8. Battery-Level Indicator on the Transmitter

9. Automatic Frequency Scanning to Select Clear Frequencies in the Installation Area
10. Two Independent Balanced XLR outputs and One Mixed Unbalanced ¼" Output
11. Two Independent Volume Control Knobs (One for Each Channel)
12. Rugged Mini Receiver Chassis
13. Operating Range up to 300ft
14. 12VDC Power Supply

SYSTEM CONFIGURATIONS

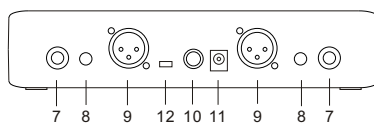
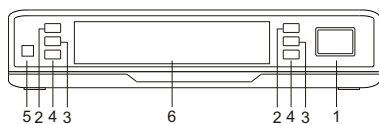
- AWM6548U - Comprising an AWR6548U receiver and two AWX6548U wireless handheld microphones
- AWM6548UF - Comprising an AWR6548U receiver and one AWX6548UH wireless headset microphone and one AWX6548UM wireless lavalier microphone
- AWM6548UG - Comprising an AWR6548U receiver and two AWX6548UG wireless guitar transmitters
- AWM6548UH - Comprising an AWR6548U receiver and two AWX6548UH wireless headset microphones
- AWM6548UL - Comprising an AWR6548U receiver and one AWX6548U wireless handheld microphone and one AWX6548UM wireless lavalier microphone
- AWM6548UM - Comprising an AWR6548U receiver and two AWX6548UM wireless lavalier microphones
- AWM6548UN - Comprising an AWR6548U receiver and one AWX6548UM wireless lavalier microphone and one AWX6548UG wireless guitar transmitter
- AWM6548UQ - Comprising an AWR6548U receiver and one AWX6548U wireless handheld microphone and one AWX6548UG wireless guitar transmitter
- AWM6548UR - Comprising an AWR6548U receiver and one AWX6548UH wireless headset microphone and one AWX6548UG wireless guitar transmitter
- AWM6548UX - Comprising an AWR6548U receiver and one AWX6548U wireless handheld microphone and one AWX6548UH wireless headset microphone

SYSTEM FUNCTIONS

SYSTEM FREQUENCY CONFIGURATIONS

- The AWR6548U includes two channels which are channel A and channel B. Facing directly to the front panel, channel A is at the left side and channel B is at the right side.
- The frequency range for channel A is from 632.000 MHz to 646.975 MHz. This frequency range is divided into six-hundred (600) fine-tuned frequencies, which are to be adjusted with the “Tune” function as described on page 18, and one-hundred (100) channels, which are to be adjusted with the “Frequency” function as described on page 13.
- The frequency range for channel B is from 647.000 MHz to 661.975 MHz. This frequency range is divided into six-hundred (600) fine-tuned frequencies, which are to be adjusted with the “Tune” function as described on page 18, and one-hundred (100) channels, which are to be adjusted with the “Frequency” function as described on page 13.
- The frequency range for both the handheld wireless microphone and the body pack wireless transmitter is from 632.000 MHz to 661.975 MHz divided into twelve-hundred (1,200) fine-tuned frequencies and two-hundred (200) channels so that both the handheld wireless microphone and the body pack wireless transmitter can be used for both channel A and channel B of the receiver.

AWR6548U RECEIVER



- 1. POWER ON/OFF & EXIT BUTTON** --- This button is to be used as a power On/Off switch and as a menu-setting exit key. When the AWR6548U receiver power is off, press this button steadily until the power is turned on. When the power is on, the LCD display will light up. While the power is on and trying to turn off the power, press this button steadily until the power is turned off. If the power is on and any system function is being adjusted, press this button will have the AWR6548U exit to the main menu.

2. **“▲” BUTTON** --- This “▲” button is used to select menu by navigating the menu icons on the LCD display from the left to the right, to raise a number, to navigate among menu functions, or to select characters during the System Name Selection processes.
3. **“SET” BUTTON** --- Press this button to confirm the selection of a menu icon, a channel number, a frequency setting, an action to be taken, or a character in the System NAME Selection processes.
4. **“▼” BUTTON** --- This “▼” button is used to select menu by navigating the menu icons on the LCD display from the right to the left, to lower a number, to navigate among menu functions, or to select characters (in the order opposite from the “▲” button) during the System Name Selection processes.

5. INFRARED SIGNAL EMISSION WINDOW (IR WINDOW)

6. **LCD DISPLAY** --- Refer to the following section for the details.

7. TNC ANTENNA JACKS

8. **AUDIO LEVEL ADJUSTMENT KNOB** --- This knob is used to raise or lower the audio level.

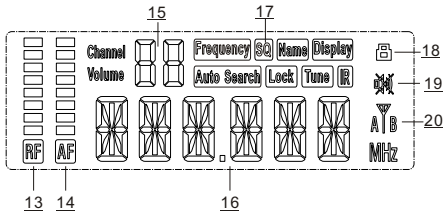
9. BALANCED MICROPHONE OUTPUTS (XLRM Jacks)

10. **UNBALANCED MICROPHONE OUTPUT (1/4” Jack)** --- This is a mixed unbalanced microphone output from both Channel A and Channel B (mixed output).

11. 12VDC INPUT (Tip Positive)

12. **MIXED 1/4” MICROPHONE OUTPUT “H/L” SWITCH** --- This switch needs to be set to the “H” position if the 1/4” output is to be connected to an audio input or a guitar input. Otherwise, this switch needs to be set to the “L” position.

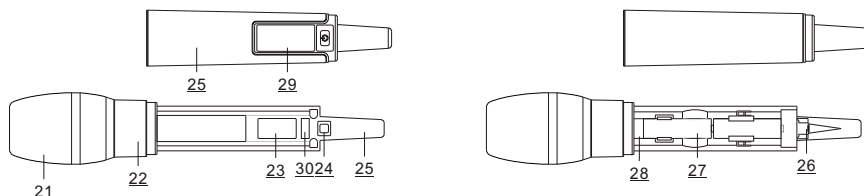
AWR6548U LCD DISPLAY PANEL



- 13. 8-GRID RADIO FREQUENCY (RF) SIGNAL LEVEL METER** -- This RF meter is used to indicate the radio frequency signal level being received from the wireless transmitter.
- 14. 8-GRID AUDIO FREQUENCY (AF) SIGNAL LEVEL METER** -- This AF meter is used to indicate the audio input level being received from the wireless transmitter.
- 15. CHANNEL Display** --- This display shows the selected channel for the AWR6548U receiver.
- 16. SIX-CHARACTER DISPLAY** --- This six-character display is used to show the menu settings, current channel number, or the current frequency setting.
- 17. MENU ICONS** --- The menu icons include the following functions: (1) Frequency, (2) SQ, (3) Name, (4) Display, (5) Auto Search, (6) Lock, (7) Tune, (8) IR.
 - (1) Frequency - This menu icon is used to select the desired frequency.
 - (2) SQ - This menu icon is used to adjust the receiver sensitivity. Higher receiver sensitivity incurs a higher RF interference possibility while lower receiver sensitivity incurs a lower RF interference possibility.
 - (3) Name - This menu icon is used to set the desired name for the receiver.
 - (4) Display - This menu icon is used to have the "Frequency", "Channel", or "Name" information displayed.
 - (5) Auto Search - Select this menu icon to have the AWR6548U receiver start to scan the clear frequencies in the AWR6548U installation area.
 - (6) Lock - Select this menu icon to have the AWR6548U receiver be locked from all key operations except the ON/OFF button.
 - (7) Tune - Select this menu icon to fine tune the frequency.
 - (8) IR - Select this menu icon to have the frequency of the transmitter be synchronized to the same frequency as the AWR6548U receiver through the infrared windows.
- 18. LOCK ICON** --- The "Lock" icon is used to indicate that the Lock function is enabled (Lock Icon light on) or disabled (Lock Icon light off). When the Lock function is enabled, the AWR6548U receiver is locked from all key operations except the ON/OFF button.
- 19. MUTE ICON** --- This is a MUTE function indicator. When the icon turns red, the MUTE function is on. Otherwise, the MUTE function is off. The MUTE function will be turned on when the RF signal level is zero or when the RF signal level is below the preset SQ level. When the RF signal level is greater than the preset SQ level, the MUTE function will be turned off again.

20. RF SIGNAL ICON --- When the RF signal level, as indicated in numeral 13, is down to zero, this RF signal icon will be turned off. When the RF signal level is greater than zero, this RF signal icon will be turned on again.

HANDHELD WIRELESS MICROPHONE



21. WIRELESS HANDHELD MICROPHONE WINDSCREEN

22. WIRELESS MICROPHONE BODY

23. LCD DISPLAY

24. POWER ON/OFF & MUTE BUTTON --- This button is to be used as a power On/Off switch and as a mute button. When the microphone power is off, press this button steadily to turn on the power. While the power is on, press this button steadily for longer than one (1) second to turn off the power. If the power is on and this button is pressed once, the receiver will be muted and the MUTE icon (see numeral 48 on page 12) on the microphone and the MUTE icon (see numeral 19 on page 9) on the receiver will be on. While the receiver is muted and this button is pressed once, the mute function on the receiver will be removed and the MUTE icon on the microphone and the MUTE icon on the receiver will be off.

25. MICROPHONE BATTERY COVER

26. RECHARGEABLE BATTERY CHARGING DC INPUT (Used for the Rechargeable batteries only) --- This input is used to charge the NiMH rechargeable AA batteries through an optional charging cable.

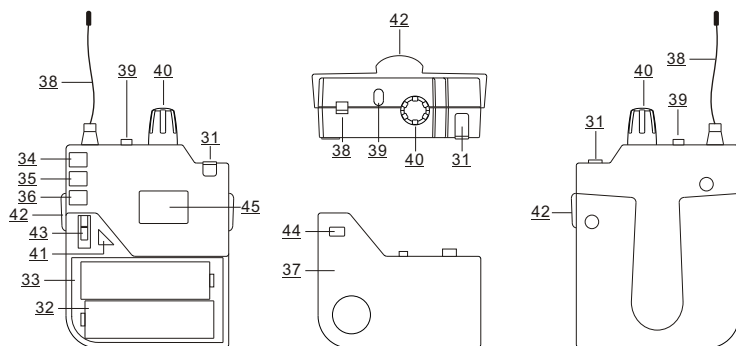
27. BATTERIES --- 2 X AA alkaline batteries or 2 X NiMH rechargeable AA batteries.

28. BATTERY HOUSING

29. LCD DISPLAY WINDOW

30. INFRARED SIGNAL RECEIVING WINDOW --- Place this window 4 inches (10cm) away and facing the receiver IR window to proceed to the transmitter frequency setting.

BODY-PACK WIRELESS TRANSMITTER



31. POWER ON/OFF & MUTE BUTTON --- This button is to be used as a power On/Off switch and as a mute button. When this body-pack transmitter power is off, press this button steadily to turn on the power. While the power is on, press this button steadily for longer than one (1) second to turn off the power. If the power is on and this button is pressed once, the receiver will be muted and the MUTE icon (see numeral 19 on page 9) on the receiver will be on. While the receiver is muted and this button is pressed once, the mute function on the receiver will be removed and the MUTE icon on the receiver will be off.

32. AA BATTERIES --- 2 X AA alkaline batteries or 2 X NiMH rechargeable AA batteries

33. AA-BATTERY COMPARTMENT

34. “UP” Button --- This “UP” button allows you to navigate through various menus or adjust the menu setting.

35. “SET” Button --- This “SET” button allows you to set and confirm a selected setting.

36. “DOWN” Button --- This “DOWN” button allows you to navigate through various menus or adjust the menu setting.

37. BATTERY COMPARTMENT COVER

38. ANTENNA

39. MICROPHONE INPUT

40. VOLUME ADJUSTMENT KNOB

41. INFRARED SIGNAL RECEIVING WINDOW --- This infrared signal receiving window is hidden behind the battery compartment cover (see numeral 37). In order to synchronize the frequency of the body-pack transmitter to the

frequency of the AWR6548U receiver, the battery compartment cover needs to be opened first to expose this infrared signal receiving window. (Refer to numeral 44 for the procedures of opening the battery compartment cover.) After the battery compartment cover is opened, place this window 4 inches (10cm) away and facing the receiver IR window to proceed to the transmitter frequency synchronization.

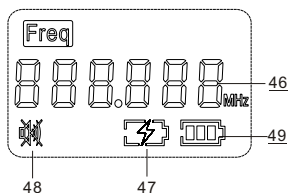
42. BELT CLIP

43. BATTERY COMPARTMENT COVER LATCH

44. LATCH BUTTON --- To open the battery compartment cover (see numeral 37), firmly press this latch button and simultaneously push the upper surface of the battery compartment cover in the direction away from the LCD display. To put an opened battery compartment cover back on its closed position, place the battery compartment cover at the lower portion of the AA-battery compartment (see numeral 33) and slide the battery compartment cover in the direction toward the LCD display until the cover is latched to the battery compartment cover latch (see numeral 43).

45. LCD DISPLAY

HANDHELD WIRELESS MICROPHONE LCD PANEL



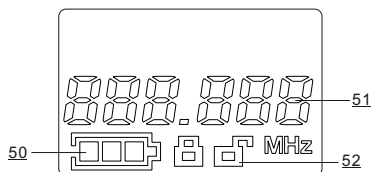
46. FREQUENCY DISPLAY --- This display is used to show the frequency setting.

47. BATTERY RECHARGING DISPLAY ICON

48. "MUTE" DISPLAY ICON

49. BATTERY-LEVEL METER --- This is used to indicate the battery power level. When the battery power level is below a predetermined level, this battery-level meter will start to blink and the batteries need to be replaced immediately.

BODY-PACK LCD PANEL



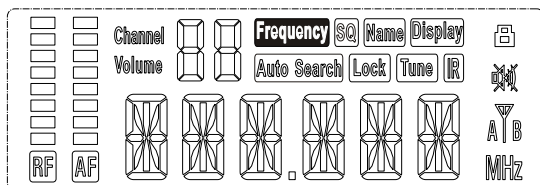
50. BATTERY-LEVEL METER --- This is used to indicate the battery power level. When the battery power level is below a predetermined level, this battery-level meter will start to blink and the batteries need to be replaced immediately.

51. SIX-CHARACTER DISPLAY --- This display is used to show the frequency setting or the channel number.

52. “LOCK” OR “UNLOCK” DISPLAY ICON

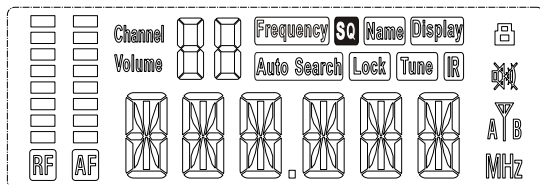
OPERATION - AWR6548U RECEIVER

FREQUENCY ADJUSTMENT



1. The “Frequency” icon is used to select the desired frequency.
2. In the main menu, press the “▲” or “▼” button to the “Frequency” icon.
3. When the “Frequency” icon is displayed, press the “SET” button. After the “SET” button is pressed, the channel number will start to blink.
4. While the channel number is blinking, press the “▲” button to increase the channel number or the “▼” button to decrease the channel number. When the “▲” or “▼” button is pressed steadily, the channel number will be increased or decreased in a fast manner until the button is released.
5. When the desired channel number is displayed, press the “SET” button to save. Once the channel number is saved, the AWR6548U will automatically exit to the main menu and the LCD display will show the previously selected “LCD Display” menu function.
6. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed while the channel number is blinking, the AWR6548U will exit to the main menu without saving the selected channel number.
7. Once the channel number is selected, the AWR6548U will keep the selected channel number until the channel number is changed later.

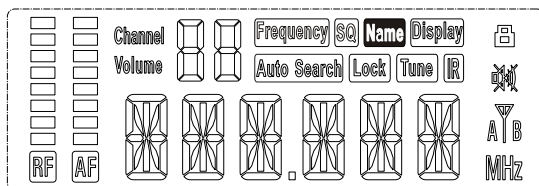
SQUELCH (SQ) ADJUSTMENT



1. The “SQ” icon is used to adjust the receiver RF input sensitivity. Higher receiver sensitivity (lower dB number) incurs a higher RF interference possibility while lower receiver sensitivity (higher dB number) incurs a lower RF interference possibility.
2. In the main menu, press the “▲” or “▼” button to the “SQ” icon.
3. When the “SQ” icon is displayed, press the “SET” button. After the “SET” button is pressed, the “dB” number will start to blink.
4. While the “dB” number is blinking, press the “▲” button to increase the “dB” number or the “▼” button to decrease the “dB” number. When the “▲” or “▼” button is pressed steadily, the “dB” number will be increased or decreased once only. There are six preset “SQ” levels. These six preset “SQ” levels are: 0dB, 5dB, 10dB, 15dB, 20dB, and 25dB (Refer to NOTE). When the maximum “SQ” level (25 dB) is reached, pressing the “▲” button will not change the “SQ” level further. Similarly, when the minimum “SQ” level (0 dB) is reached, pressing the “▼” button will not change the “SQ” level further.
5. When the desired “dB” number is displayed, press the “SET” button to save. Once the “dB” number is saved, the AWR6548U will automatically exit to the main menu and the LCD display will show the previously selected “LCD Display” menu function.
6. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed while the “dB” number is blinking, the AWR6548U will exit to the main menu without saving the selected “dB” number.
7. Once the “dB” number is selected, the AWR6548U will keep the selected “dB” number until the “dB” number is changed later.

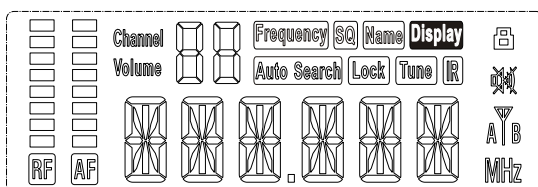
NOTE: The recommended “SQ” level is 5dB. The higher the “SQ” level (namely the higher the “dB” number) is, the lower the receiver sensitivity is. Lower receiver sensitivity will have the effective wireless-transmission range shorter.

SYSTEM NAME SELECTION



1. The “NAME” icon is used to select a desired name for the receiver. The selected name can be up to six characters. The options of the characters are: (a) ten numerical digits from 0 to 9; (b) twenty-six English alphabets from A through Z; (c) special symbols including: “+”, “-”, “*”, “/”, “\”, “>”, “<”, “_”, and space (Blank).
2. In the main menu, press the “▲” or “▼” button to the “Name” icon.
3. When the “NAME” icon is displayed, press the “SET” button. After the “SET” button is pressed, the first character (at the left side) will start to blink.
4. While the first character is blinking, press the “▲” button to toggle through the “numbers (from 0 through 9)”, “English alphabets (A through Z)”, “+ - * / \ > < _ Blank”, and then back to the “numbers”.
5. Once the desired character is reached, press the “SET” button to save the selected character and the AWT6548U will move to the next one (the one at the immediately right side) until all six characters have been selected.
6. After all six characters have been selected, the AWR6548U will automatically exit to the main menu and the LCD display will show the previously selected “LCD Display” menu function.
7. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed during the “NAME” selection process, the AWR6548U will exit to the main menu without saving any of the selected characters.
8. Once the “NAME” of the AWR6548U is selected, the AWR6548U will keep the selected “NAME” until the “NAME” is changed later.

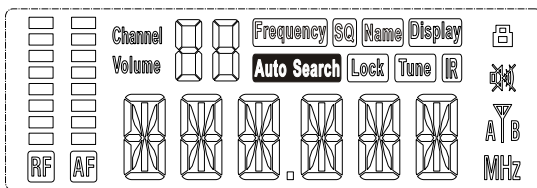
LCD DISPLAY SELECTION



1. Move to this “Display” icon to select the desired menu function to display. The options of the menu function to be displayed include: (a) FREQ - the frequency number; (b) CHAN - the channel number, or (c) NAME - the selected receiver name.
2. In the main menu, press the “▲” or “▼” button to the “Display” icon.
3. When the “Display” icon is displayed, press the “SET” button. After the “SET” button is pressed, the menu function (FREQ, CHAN, or NAME) selected previously will start to blink.
4. Then press the “▲” or “▼” button to toggle the menu-function display among “FREQ”, “CHAN”, and “NAME”.
5. With the desired menu-function displayed, press the “SET” button to save and exit to the main menu. Once desired menu function is selected, the selected menu function will be displayed until it is changed.
6. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed during the menu-function display selection process, the AWR6548U will exit to the main menu without changing the menu-function display on the LCD panel.

NOTE: In order for the LCD display to show the Channel number, the frequency needs to be set to one that is corresponding to a channel number, instead of being a frequency between two channel numbers. For an AWR6548U tuned to a frequency between two channel numbers, the displayed channel number will be “U”.

FREQUENCY SCAN

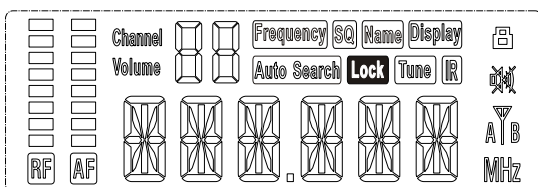


1. The “Auto Search” icon is used to automatically scan the surrounding area to select clear frequencies.
2. In the main menu, press the “▲” or “▼” button to the “Auto Search” icon.
3. When the “Auto Search” icon is displayed, press the “SET” button. After the “SET” button is pressed, the display “NO” will start to blink.
4. Press the “▲” or “▼” button to toggle the display between “YES” and “NO”.

- Then, press the “▲” or “▼” button to have the display “YES” and press the “SET” button to start the frequency scan. The display will sweep through all one hundred channels (from “CH 00” to “CH 99”) twice automatically. At the end of the automatic sweeps, the channel number will go to the channel which is the clear frequency in this surrounding area and the AWR6548U will exit to the main menu.

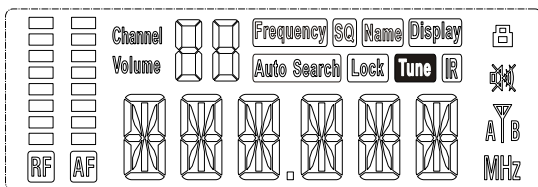
NOTE: If the display shows “NO” and the “SET” button is pressed, the AWR6548U will exit to the main menu.

SYSTEM LOCK



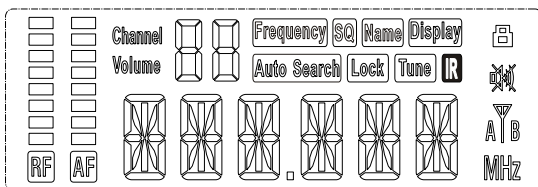
- The “Lock” icon is used to indicate that the Lock function is enabled or disabled. When the Lock function is enabled, the AWR6548U receiver is locked from all key operations except the “▲”, “▼”, and ON/OFF buttons.
- When the AWR6548U is not locked, press the “▲” or “▼” button to the “Lock” icon in the main menu.
- After the “Lock” icon is displayed, “OFF” will appear for a short period of time and the LCD display will show the previously selected “LCD Display” menu function.
- With the “Lock” icon displayed, press the “SET” button and “OFF” or “ON”, depending upon the previous “Lock” setting, will start to blink.
- Then press the “▲” or “▼” button to toggle between “ON” or “OFF”.
- If it is desired to have the AWR6548U be locked from any further adjustment, press the “▲” or “▼” button to select “ON” and press the “SET” button to save and exit to the main menu. The “Lock Icon” (refer to page 9) will be on and the AWR6548U will be locked from all key operations except the ON/OFF button.
- If it is desired to have the AWR6548U be unlocked such that all key operations are allowed, press the “▲” or “▼” button to select “OFF” and press the “SET” button to save and exit to the main menu. The “Lock Icon” will be off and the key operations on the AWR6548U will be allowed.

FREQUENCY TUNING



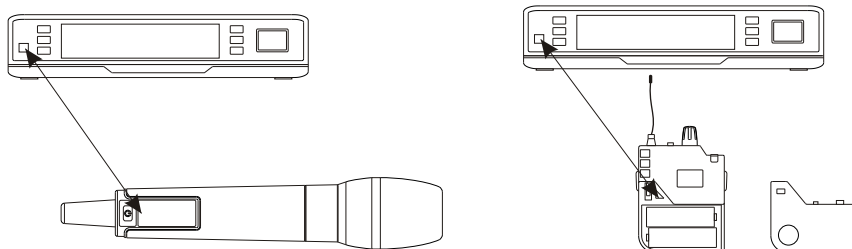
1. The “Tune” icon is used to manually fine tune the AWR6548U frequencies. There are six hundred (600) frequencies to be fine tuned to.
2. In the main menu, press the “▲” or “▼” button to the “Tune” icon.
3. With the “Tune” icon displayed, press the “SET” button to display the current frequency setting.
4. Then press the “▲” or “▼” button to increase or decrease the frequency by the step of 250 KHz. When the “▲” or “▼” button is pressed steadily, the frequency will be increased or decreased in a fast manner until the button is released. When the upper limit or the lower limit of the frequency is reached, the frequency will go back to the lower limit or higher limit and continue increasing or decreasing.
5. Once the desired frequency is reached, press the “SET” button to save and exit to the main menu. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed, the AWR6548U will exit to the main menu without saving the selected frequency.
6. The “CHANNEL Display” will display a capital letter “U”, instead of the number (from 0 to 99), if the frequency is tuned to a frequency between two channel numbers.
7. Once the fine-tuned frequency is selected, the AWR6548U will keep the selected frequency until the frequency is changed later.

INFRARED (IR) FREQUENCY MATCHING



1. The “IR” icon is used to have the frequency of the AWR6548U transmitter be set to the same frequency as that of the AWR6548U receiver through the infrared windows.

2. In the main menu, press the “▲” or “▼” button to the “IR” icon.
3. After the “IR” icon is displayed, press the “SET” button and “NO” will be displayed.
4. Then press the “▲” or “▼” button to toggle the display between “YES” or “NO”.
5. If it is desired to have the frequency of the AWX6548U transmitter be set to the same as that of the AWR6548U receiver, press the “▲” or “▼” button to have the “YES” display.
6. When “YES” is displayed, press the “SET” button to prepare to set the transmitter frequency as follows:



As shown in the above diagram, align the IR window of the AWX6548U (see NOTE 2) to the IR window of the AWR6548U with a distance of less than four inches (10cm). The LCD screen will display “IR >>>”. When the frequency of the AWX6548U is successfully set, the AWR6548U will return to the main menu. Otherwise, the LCD screen will display “END”. When the “END” is displayed, press any button to return to the main menu.

NOTE 1: When “NO” is displayed, the AWR6548U will exit to the main menu without any further action. Press the “POWER ON/OFF” button at any time, the AWR6548U will exit to the main menu without saving any setting.

NOTE 2: The infrared signal receiving window of the body-pack transmitter is hidden behind the battery compartment cover (see numeral 37 on page 11). In order to synchronize the frequency of the body-pack transmitter to the frequency of the AWR6548U receiver, the battery compartment cover needs to be opened first to expose the infrared signal receiving window. (Refer to numeral 44 on page 11 for the procedures of opening the battery compartment cover.) After the battery compartment cover is opened, place this window 4 inches (10cm) away and facing the receiver IR window to proceed to the transmitter frequency synchronization.

OPERATION - BODYPACK TRANSMITTER

CHANNEL ADJUSTMENT



CHAN

1. Press the “SET” button to enter the main menu.
2. In the main menu, press the “UP” or “DOWN” button until “CHAN” is displayed on the LCD screen.
3. After “CHAN” is displayed, press the “SET” button to display the current channel setting.
4. Then press the “UP” or “DOWN” button to increase or decrease the channel number. When the “UP” or “DOWN” button is pressed steadily, the channel number will be increased or decreased in a fast manner until the button is released. When the upper limit or the lower limit of the channel number is reached, the channel number will go back to the lower limit or higher limit and continue increasing or decreasing.
5. Once the desired channel number is reached, press the “SET” button to save and exit to the main menu. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed, the AWX6548U will exit to the main menu without saving the selected channel number.
6. The channel numbers are from “000” to “199” in which channels 000 through 099 are for the A side (Channel A) and channels 100 to 199 are for the B side (Channel B).

NOTE: The display will exit to the main menu if the channel display is left inactive for about 3 seconds.

FREQUENCY ADJUSTMENT

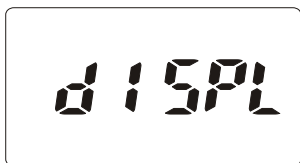


TUNE

1. Press the “SET” button to enter the main menu.
2. In the main menu, press the “UP” or “DOWN” button until “tUnE” is displayed on the LCD screen.
3. After “tUnE” is displayed, press the “SET” button to display the current frequency setting.
4. Then press the “UP” or “DOWN” button to increase or decrease the frequency by the step of 250 KHz. When the “UP” or “DOWN” button is pressed steadily, the frequency will be increased or decreased in a fast manner until the button is released. When the upper limit or the lower limit of the frequency is reached, the frequency will go back to the lower limit or higher limit and continue increasing or decreasing.
5. Once the desired frequency is reached, press the “SET” button to save and exit to the main menu. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed, the AWX6548U will exit to the main menu without saving the selected frequency.

NOTE: The display will exit to the main menu if the frequency display is left inactive for about 3 seconds.

DISPLAY SELECTION



1. This Display function is to select either the frequency setting or the channel number to be displayed on the LCD screen.
2. Press the “SET” button to enter the main menu.
3. In the main menu, press the “UP” or “DOWN” button until “dISPL” is displayed on the LCD screen.
4. After “dISPL” is displayed, press the “SET” button to display the current setting.
5. Then press the “UP” or “DOWN” button to toggle the display between “dI Fr” or “dI CH”. Selecting “dI Fr” will have the frequency displayed and selecting “dI CH” will have the channel number displayed. (NOTE: In order for the LCD display to show Channel number, the frequency needs to be set to the one that is corresponding to a channel, instead of being a frequency between two channel numbers)
6. With either “dI Fr” or “dI CH” on the display, press the “SET” button to save and exit to the main menu. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed, the AWX6548U will exit to the main menu without saving the selected menu function.

7. If the “dI Fr” is selected, the LCD display will show the “Frequency” setting. If the “dI CH” is selected, the LCD display will show the “Channel” number.

NOTE: The display will exit to the main menu if the “dL Fr” or “dL CH” display is left inactive for about 3 seconds.

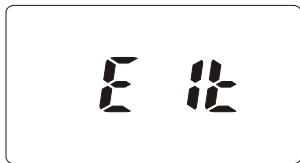
LOCK MODE SETTING



1. The Lock mode is used to enable or disable the Lock function. When the Lock function is enabled, the AWX6548U transmitter is locked from all adjustment.
2. Press the “SET” button to enter the main menu.
3. In the main menu, press the “UP” or “DOWN” button until “LOC” is displayed on the LCD screen.
4. After the “LOC” menu is displayed, press the “SET” button and the display will show “LOC OFF”.
5. Then press the “UP” or “DOWN” button to toggle the menu-function display among “LOC OFF” and “LOC ON”.
6. If it is desired to have the AWX6548U transmitter be locked from any further adjustment, press the “UP” or “DOWN” button to the “LOC ON” display.
7. With the “LOC ON” displayed, press the “SET” button to save and exit to the main menu. If the “POWER ON/OFF” button, instead of the “SET” button, is pressed, the AWX6548U transmitter will exit to the main menu without saving the selected menu function.

NOTE: The display will exit to the main menu if the “LOC ON” or “LOC OFF” display is left inactive for about 3 seconds.

QUIT



1. Press the “SET” button to enter the main menu.
2. In the main menu, press the “UP” or “DOWN” button until “Eit” is displayed on the LCD screen.
3. Press the “SET” button to exit to the main menu. If the “POWER” button, instead of the “SET” button, is pressed, the AWX6548U transmitter will also exit to the main menu.

SETTING UP & DEBUGGING

1. After the AWM6548U system has been set up, keep both AWX6548U transmitters powered off and turn both volume control knobs on the AWR6548U receiver all the way to the minimum. Turn on the power of the AWR6548U receiver. Both LCD screens will display the settings of the previous set-up.
2. On the AWR6548U, tune both channels to have desired frequencies with manual tuning or the auto scan (preferably auto scan). Adjust both channels to have the SQ level of 5 dB and, then, return to the main menu. At this stage, both transmitters are still off. If the radio frequency (RF) signal level indicator shows an incoming RF signal received by the AWR6548U receiver, there is an intermittent interference signal to the receiver. Either adjust the SQ level higher (higher dB number) or change the frequency with manual tuning or auto scan again. Repeat this process until the RF signal is clear.
3. Turn on both transmitters. After the built-in CPU completes initialization, check if the frequencies of both transmitters are the same as the frequencies of both channels of the receiver. If any transmitter has different frequency from that of the receiver, refer to the INFRARED FREQUENCY MATCHING section (refer to page 19) to synchronize the transmitter frequency to the receiver frequency. Once the frequencies for both transmitters are matched to the frequencies of the receiver, adjust the volume control for each channel and the AWM6548U is ready to be used.

OPERATION NOTES

1. The AWX6548U, AWX6548UG, AWX6548UH, and AWX6548UM need to be turned off before changing the AA batteries.
2. Signal dropout or unexpected noise may be caused by a low battery or by an excessive distance between the transmitter and the receiver. If you encounter signal dropout or unexpected noise, please check the batteries first. If the batteries are still fresh, try to readjust the antennas on the AWR6548U receiver.
3. Avoid placing the receiver in a corner to prevent any RF reception deterioration.
4. Avoid placing the receiver antennas close to an obstruction or close to any metal surface.
5. Try to place the receiver as far away from the digital equipment, including computers and CD players, as possible.
6. If more than one AWR6548U wireless microphone receivers are stacked together or placed in a rack, do not let the antennas touch each other or cross each other.
7. Before the AWM6548U is to be used in a new location, place the AWR6548U receiver at the intended location and walk through the area with the transmitters to locate any radio frequency blind spots, where a momentary loss of sound or short period of noise may occur whenever the transmitters are moved to these spots.
8. Do not drop the transmitter on the floor or strike the transmitter with any object.
9. Always turn off the transmitter and remove the batteries if the transmitter is not to be used for a period of time to prevent the transmitter from being damaged by leaking batteries.

SPECIFICATIONS

AWR6548U RECEIVER

RECEIVING MODE	SUPERHETERODYNE DOUBLE CONVERSION
INTERMEDIATE FREQUENCIES	110MHz, 10.7MHz
ANTENNA INPUT	TNC / 50 Ω
SENSITIVITY	15dBuV
SENSITIVITY REGULATING RANGE	15-30dBuV
RF SQUELCH	>80dB
WEIGHT	1.4 lbs (0.64 Kg)
DIMENSIONS (W X D X H)	8.3" X 7.1" X 1.9" (210 X 180 X 48 mm)

AWX6548U TRANSMITTER

ANTENNA	BUILT-IN ANTENNA, QUARTER-WAVE WHIP ANTENNA
EMISSION POWER	8mW
MAX SPL	130dB
IMAGE SPURIOUS	>70dB
MICROPHONE CARTRIDGE	HANDHELD MICROPHONE: DYNAMIC LAVALIER or HEADSET: ELECTRET CONDENSER
BATTERIES	ALKALINE AA X 2 or RECHARGEABLE AA X 2

AWM6548U SYSTEM

FREQUENCY RANGE	UHF
MODULATION MODE	FM
OSCILLATION MODE	VCO + PLL
DEVIATION	± 45 KHz (COMPRESS-EXPAND and AUTOMATIC-VOLUME- LIMIT CIRCUIT)
CHANNEL WIDTH	30MHz
S/N RATIO	>85dB
TOTAL HARMONIC DISTORTION	<0.3% (1 KHz, A WEIGHTING)
FREQUENCY RESPONSE	80 – 15,000 Hz (± 3 dB)

TROUBLESHOOTING

Should problems occur, they are, in many cases, due to simple operation mistakes or the like. On the basis of the following checks, you will be able to rectify a number of problems yourself without difficulty. If the problem cannot be remedied after the following checks, please consult your dealer.

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
No sound and no RF signal	The power of the transmitter is off.	Turn on the transmitter.
	Incorrect AA-battery polarity in the transmitter.	Correct the AA-battery polarity.
	Antenna is not on the receiver or bad antenna connection.	Install the antenna or check the antenna connection.
	Transmitter too far away from the antenna or RF signal blocked.	Reposition the transmitter to closer area or remove the RF signal block.
No sound while RF and AF signals normal.	Receiver volume turned to minimum.	Adjust the volume control knob to have an optimal volume output.
	Receiver audio cable is missing or defective.	Connect, repair or replace the audio cables.
	Volume control of the sound system connected to the AWR6548U receiver is set to minimum.	Adjust the volume control on the sound system which is connected to the AWR6548U receiver.
No sound while RF signal is normal and AF signal does not exist.	The microphone cartridge of the transmitter is defective.	Return transmitter to factory or authorized service station for service.
	The mute function on the transmitter was turned on.	Turn off the mute function on the transmitter.
		If the mute function was not turned on, the SQ level on the receiver might be set too high.

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
Loud noise from receiver only when the transmitter is off.	Interference signal at that frequency.	Adjust the receiver sensitivity by adjusting the squelch (SQ) to try to remove the interference.
		Reposition receiver or adjust the antenna orientation.
		Select another operating frequency.
	Receiver is placed too close to an interference source, such as a computer, digital device, or CD player.	Move the receiver to another location. Select another operating frequency.
Loud noise from receiver even when the transmitter is on.	Another transmitter is using the same frequency.	Turn off another transmitter or change to a channel with a different frequency.
	Interference signal at that frequency.	Select another operating frequency.
	Receiver is placed too close to an interference source, such as a computer, digital device, or CD player.	Move the receiver to another location.
		Select another operating frequency.
Distorted sound	Low transmitter battery level.	Replace transmitter battery.
	The volume control on the receiver is set too high, overloading the subsequent sound device input.	Turn down the volume control on the AWR6548U receiver.
Short range or signal dropouts.	Low transmitter battery level.	Replace transmitter battery.
	Poor antenna reception.	Reposition antenna or receiver.
	Interference Signal.	Select another operating frequency.
	Too many obstacles between the receiver and transmitter.	Move the obstacles or move the receiver away from nearby metal objects.
Momentary loss of sound when transmitter is moved around the performing area.	Radio frequency (RF) blind spots.	Reposition the receiver. If the momentary loss of sound problem cannot be removed, walk through the performing area and mark "Blind" spots. Avoid these "Blind" spots during performance.

SERVICE INFORMATION

SHIPPING DAMAGE

If the shipping carton is found to be damaged, notify the delivery company immediately. Save the damaged carton as evidence for the delivery company to inspect. It is the responsibility of the consignee to file a claim with the delivery company for any damage that occurs during shipping. In the case that the shipping carton is in good condition but the unit is damaged or defective, call **Audio2000'S®** at 805/523-2759.

FACTORY SERVICE

If the equipment needs factory service, call **Audio2000'S®** at 805/523-2759 for a Return Authorization number (RA number) and the address of the authorized service representatives. Insure and ship the product, prepaid, in its original carton along with proof of purchase in the form of a bill of sale or receipted invoice to the above address. Please clearly write the RA number on the shipping carton. Also enclose a note describing the problem along with any other helpful information such as where and how the unit was used.

LIMITED WARRANTY

H&F Technologies, Incorporated (H&F) hereby warrants that **Audio2000'S®** products will be free from defects in material and workmanship for a period of 1 (one) year from date of purchase. At its option, H&F will repair or replace the defective product and promptly return it to you.

The Limited Warranty will not cover any item that has been, in H&F's estimation, subject to alteration, misuse, neglect, accident or improper installation. In addition, any service not performed by H&F or an authorized service center will terminate terms of this warranty. Normal wear and tear of this product will not be covered by this or any implied warranty.

No liability will be accepted for damages/loss directly caused from the use of this product. H&F's liability shall be limited to the repair/replacement of this product if found to be defective.

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