



UDR-1000 / UDR-2000

UHF PLL Synthesized Single / Dual Channel
True Diversity Wireless Microphone System

UH-2000 / UB-2000

Operation Manual



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INTRODUCTION

Congratulations, thank you for the purchase of one of these state-of-the-art UHF PLL Synthesized 1000-frequency professional wireless systems.

As this is a shared operation manual, please read it thoroughly to familiarize with the function of each part before use.

The following table gives an over view of the individual system.

System Overview :

Model	UDR-1000	UDR-2000
Frequency Band	UHF	
No. of Channel	1000	2*1000
Reception Mode	Ture Diversity	
No. of Receiver	1	2
AC Adapter	12-15V / 800mA	12-15V / 1500 mA
Size	19"	
Casing	Metal	
Receiver LCD Color	White in Blue LCD	
Handheld Transmitter	UH-2000	
Beltpack Transmitter	UB-2000	
Battery used in Transmitter	AA * 2	

4 · If the Volume Control of the receiver is set too high, it may over-drive the input of the mixer, causing distortion. Conversely, if the receiver output is set too low, the overall signal to noise ratio of the system may be reduced. Adjust the output level of the receiver such that highest sound pressure level going into the microphone causes no input overload in the mixer, and yet permits the mixer level controls to operate in their normal range (not too high or too low). This provides the optimum signal to noise for the entire system.

5 · When inserting the batteries, please make sure that they are inserted according to the correct polarity.

6 · For PLL frequencies agile version, before operation please make sure that the corresponding receiver MUST have the same frequency group and channel number as the transmitter.

7 · Before making any channel change, please switch off the power supply. The synthesized program works in such a way that a change of channel will only take place after a power off and on action. Otherwise, the previously selected frequency will stay unchanged.

8 · After making a channel change, please make sure that the corresponding change is made on the matching receiver also. To be exact, changes MUST be made at both the transmitter and receiver.

9 · Use only brand new Alkaline batteries. Do not use " general purpose " batteries. When batteries are weak, replace the batteries altogether at the same time. Do not mix and use new and old batteries together.

10 · Position the receiver so that it has the least possible obstructions between it and the transmitter. Line of sight is best!

11 · The transmitter and the receiver should be as close as possible but not less than 1m.

12 · A receiver cannot receive signals from two or more transmitters simultaneously.

13 · Turn the transmitter off when it is not in use. Remove the batteries if it is not to be used for a period of time.

REMARKS

RF Interference

If you encounter receiving interference (from other than an operating TV station), often it can be overcome by adjusting the receiver's squelch control, as described on below.

Please note that wireless frequencies are shared with other radio services. According to FCC regulations, wireless microphone operations are unprotected from interference from other licensed operations in the band. If any interference is received by any Government or non-Government operation, the wireless microphone must cease operation. The above statement is valid in the U.S.A.

Receiver Squelch setting

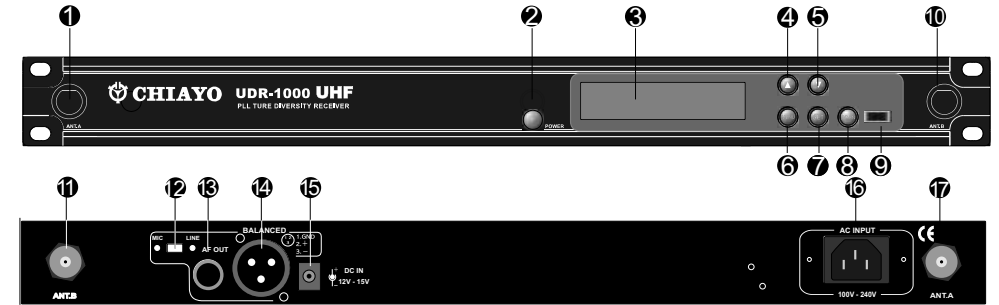
The squelch control setting is per LCD display on the front panel of the receiver is preset at the factory, but can be adjusted if you must use the system in a high RF interference area. If there is audio output from the receiver when your transmitter is OFF, adjust the squelch control so the system will receive the signal from your transmitter but squelch or eliminate the unwanted background RF noise. This adjustment can cause a reduction in usable range of the wireless transmitter, so set the control to the lowest position which reliably mutes the unwanted RF signal.

TIPS TO OBTAIN THE BEST RESULTS FOR A WIRELESS MICROPHONE SYSTEM

- 1 · If external antenna is used, low loss RF shielded cable should be used and the length of the cable should not exceed 3m.
- 2 · Do not place the receiver antenna within 1 m from another receiver or antenna.
- 3 · The receiver antenna should be kept away from any metal surface.

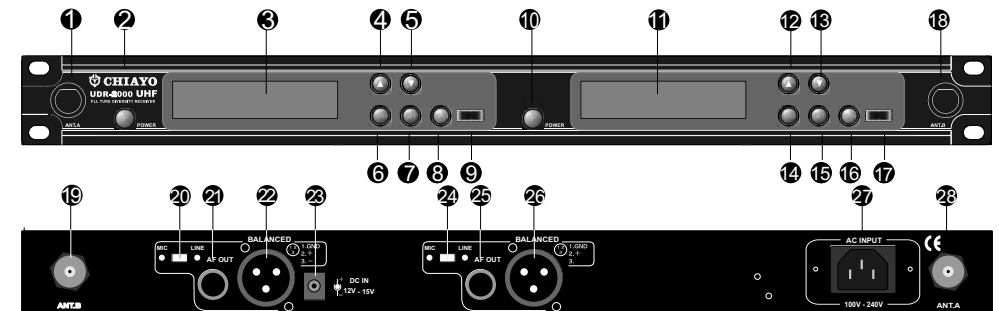
Parts and functions

● UDR-1000 Receiver



- | | | |
|---------------------------------|----------------------------------|--|
| 1. Slot for front mount antenna | 7. SET | 13. Unbalanced Out |
| 2. Power switch | 8. SCAN | 14. Balanced Out |
| 3. LCD Display | 9. USB port | 15. DC IN jack (for certain market only) |
| 4. UP button | 10. Slot for front mount antenna | 16. AC IN jack (for certain market only) |
| 5. DOWN button | 11. Antenna B socket | 17. Antenna A socket |
| 6. MENU | 12. Mic / Line level Switch | |

● UDR-2000 Receiver



- | | | |
|---------------------------------|----------------------------------|--|
| 1. Slot for front mount Antenna | 11. LCD Display | 21. Unbalanced Out |
| 2. Power switch | 12. UP button | 22. Balanced Out |
| 3. LCD Display | 13. DOWN button | 23. DC IN jack |
| 4. UP button | 14. MENU | 24. Mic / Line level Switch |
| 5. DOWN button | 15. SET | 25. Unbalanced Out |
| 6. MENU | 16. SCAN | 26. Balanced Out |
| 7. SET | 17. USB port | 27. AC IN jack (for certain market only) |
| 8. SCAN | 18. Slot for front mount Antenna | 28. Antenna A socket |
| 9. USB port | 19. Antenna B socket | |
| 10. Power switch | 20. Mic / Line level Switch | |

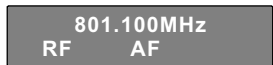
To view and roll the various display pages

Press Power ON of receiver for 2 seconds and release, the following page will appear.



Note : Transmitter is at OFF status.

After 3 seconds one of the following pages will automatically appear, depending on which one was last selected as main page.



Press MENU to roll to next page



If MENU is not pressed again, this page will stay as main page.

Press MENU to roll to next page



If MENU is not pressed again, it will automatically return to previous page.

Press MENU to roll to next page



If MENU is not pressed again, it will automatically return to previous page.

Press MENU to roll to next page



If MENU is not pressed again, it will automatically return to previous page.

Press MENU to roll to next page



If MENU is not pressed again, this page will stay as main page.

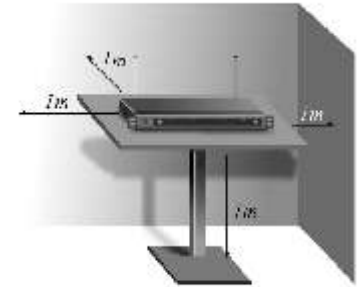
Press MENU to roll to next page



If MENU is not pressed again, this page will stay as main page.

Receiver Installation

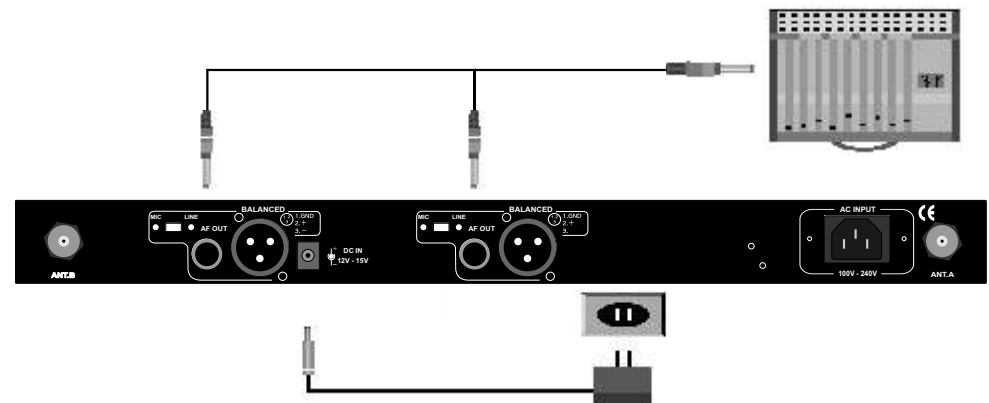
For best operation, the receiver should be placed at least 1m above the ground and 1m away from a wall or metal surfaces to minimize reflections. The transmitter should also be at least 1m away from a wall or metal surface to minimize reflections. The transmitter should also be at least 1m away from the receiver as shown.



Keep antennas away from noise source such as motors, automobiles, neon light, synthesizer, computer as well as large metal objects.

Audio output connection

There are two audio outputs on the back of the Diversity receiver. Mic-level balanced and Line-level unbalanced. Use shielded audio cable for the connection between the receiver and the mixer. If the mixer / amp is a 1/4" phone jack, connect a cable from the 1/4" unbalanced audio output from the receiver to the mixer / amp. If the mixer has an XLR input, connect a cable from the balanced XLR audio output from the receiver to the mixer input. Audio output connection as shown below.



4. Making changes to Battery selection:

Press the ▲ or ▼ button to



Press UP or DOWN button to move the cursor to either NiMH (rechargeable battery) or AKLN (Alkaline battery) position.

When the desired battery has been selected, it will be automatically saved and stored in the memory.

Remark : NiMH battery must be selected when rechargeable battery is being used. Never select AKLN (Alkaline) when transmitter is intended for charging as Alkaline battery can not be charged ! Wrong selection of battery will result in battery sensing electronics to display wrong and misleading status information.

5. Making changes to Mode settings:

Press ▲ or ▼ button to go to the display.



Press **SET** for about 3 seconds to enter the **SET** mode. Press the ▲ or ▼ button to select the **USER** or the **PRESET** model. X is not select, ← is for select. Press **SET** for about 3 seconds to save the change.

When **PRESET** is selected, factory preset data is selected. When **USER** is selected, user could change the frequency as follow :

Programming of **USER** frequencies.

At the **USER / PRESET Display**, press **SET** for about 2 seconds to enter the **SET** mode , then press the ▲ or ▼ button till Edit channel display appear :



Press **SET** each time to move the cursor one position to the desired position and press the ▲ or ▼ button to change the digit. Press **SET** for about 3 seconds to save the change. User is allowed to program 40 frequencies within the micro range of 25 MHz and this is save in Group 25.

This function is meant for user with extra radio knowledge and it is not advisable for normal user to use this function.

6. Input Level Gain Control Adjustment (only for UB-2000)

Low impedance (Lo-Z) " MT" & high impedance (Hi-Z) " GT" gain controls are situated inside the transmitter. Gain controls are adjustment ports that enable you to use microphones of differing output levels and Guitar or instruments with Hi-Z output. To adjust microphone (Lo-Z) input levels, turn the "MT" control and to adjust the Guitar or instrument (Hi-Z) input, adjust the "GT" gain control to set the transmitter's desired audio input level.

Operating Instructions

Making changes to the various displays.

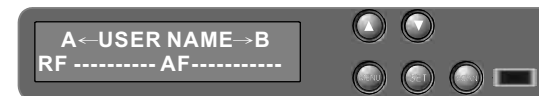
Press **MENU** until this page appears.



Remark : Brand name and Model number are factory preset. It is NOT user-changeable.

1. To change User Name

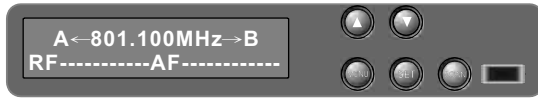
Press **MENU** until this page appears.



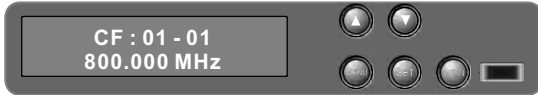
Remark : Transmitter is ON, then A or B, RF & AF level indicator will light up. Press **SET** button for 2 seconds to enter the **SET** mode and the cursor will flash. Press **SET** again each time will move the cursor one position. Use the ▲ or ▼ button to select the character or digit. Press **SET** again to save the change and move the cursor one position forward. After finishing all the changes, press **SET** button for about 3 seconds to save the changes.

2. To change Frequency

Press **MENU** until this page appears.



Press **SET** button for 2 seconds to enter the **SET** mode and the following display will appear and the cursor will flash.



Press **SET** again each time will move the cursor one position. The first two digits on the top left is the Group and the second two digits on the top right is the Channel. There are all together 25 Groups and 40 Channels (25*40=1000) preset frequencies to be chosen. Use the ▲ or ▼ button to select the digit. Press **SET** again to save the change and move the cursor one position forward. Once either the Group or the Channel has been altered, the frequency will be changed automatically. After finishing all the changes, press **SET** button for about 3 seconds to save the changes.

3. To change Squelch level

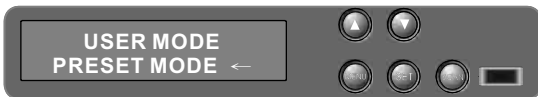
Press **MENU** until this page appears.



Press **SET** button for 2 seconds to enter the **SET** mode and the cursor will flash on only one spot. Use the ▲ or ▼ button to select one of the 8 preset levels. After making the change, press **SET** button for about 3 seconds to save the changes.

4. To go to User Mode

Press **MENU** until this page appears.



Press **SET** button for 2 seconds to enter the **SET** mode. Use the ▲ or ▼ button to select either **USER** or **PRESET** mode. "←" indicates selected. After making the change, press **SET** button for about 3 seconds to save the change.

Making changes to various settings in UH-2000 / UB-2000

1. Making changes to User Name:

Press the ▲ or ▼ button to



Press **SET** for about 3 seconds to enter the **SET** mode and the cursor will start flashing. Press **SET** separately to move the cursor to the desired position where change is needed. Press the ▲ or ▼ button to select the character or number and press **SET** to make the change and move the cursor one step forward. After finishing all the changes, press **SET** for about 3 seconds to save the changes.

2. Making changes to User Name:

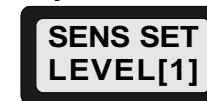
Press the ▲ or ▼ button to



Press **SET** for about 3 seconds to enter the **SET** mode and the cursor will start flashing. Per press of **SET** can move the cursor one step to the desired position to change the frequency. The first two digits on the left are GROUP (GP) and the two digits on the right are CHANNEL (CH). There are altogether 25 preset Groups and 40 preset Channels available for selection. Press the ▲ or ▼ button to select the number. As the GP or CH number is changed, the preset frequency will appear in the second line accordingly. After changes finished, press **SET** button for about 3 seconds will save the changes.

3. Making changes to Sensitivity Level:

Press the ▲ or ▼ button to



Press UP or DOWN button to increase or decrease the Sensitivity Level of the transmitter. The MAX level is 4 and the MIN level is 1.

When a desired sensitivity level has been selected for your application, it will be automatically saved and stored in the Memory.

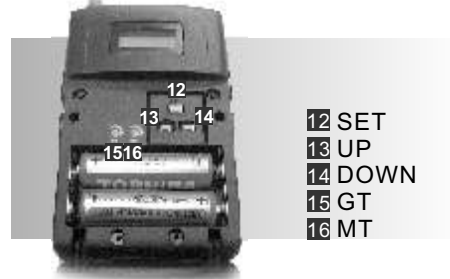
Remark : When selecting Sensitivity level, please bear in mind that Level 1 is for close proximity singing purposes whereas Level 4 is for use of transmitter on tripod mount for speech purposes. When Level 4 setting is used for close proximity singing, high SPL input will result in undesirable distortion in the output.

Beltpack Transmitter : UB-2000 (UHF)

Parts and functions



- 1 Antenna
- 2 Battery weak / audio mute indicator
- 3 Audio mute switch
- 4 Mini-XLR connector
- 5 Power ON / OFF switch
- 6 LCD display
- 7 Mini USB port
- 8 Cover release button
- 9 Charging contacts
- 10 Lavalier microphone
- 11 Mic clip



- 12 SET
- 13 UP
- 14 DOWN
- 15 GT
- 16 MT

Battery installation

UB-2000 uses 2 pieces of "AA" size batteries (Alkaline battery is recommended). To install or remove the batteries, press the release buttons at the edges of the transmitter to open or close the cover as illustrated below.



9



6

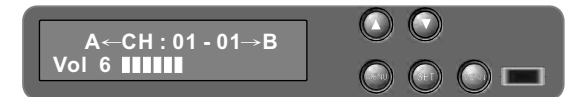
After entered user mode



Press **SET** button for 2 seconds to enter the **SET** mode and the cursor will flash. Use the **▲** or **▼** button to select the digit desired. The two digits at the top right corner is Channel. There are 40 channels for user to make frequency setting. After selecting any channel, press SET and the cursor will move to the first frequency digit, indicating to start setting its corresponding frequency. Please note that all frequencies **MUST** be within the bandwidth or setting will be invalid. If all finished, press SET for about 3 seconds to save changes to User Mode.

5. To adjust the Volume of the system

The **▲** and **▼** buttons at the front panels serve as the Volume Controls of the receiver. It can be pressed at any moment. Whenever it is pressed, the following display will appear :



The first line of the display remains the same as whichever status when the button is pressed. Only the second line of the display will show the word VOL and the digit in the bracket is the current status of the volume level. The bar is just the graphical representation of the level. Pressing the **▲** button will increase the digit as well as the bar. Pressing the **▼** button will decrease the digit as well as the bar.

SCAN function

The **SCAN** button has two functions :

1. Auto scan

When **SCAN** button is pressed, receiver will start the auto scanning function. It will compare 200 of the preset frequencies with the environment and select 40 of them and save it in Group 1 of the 25 groups. The whole **SCAN** process will take about 3 minutes to complete. These frequencies are interference free frequencies but they do not mean they are inter-modulation free amongst themselves. That means they do not mean they are interference free amongst themselves.

During the **SCAN** process, press the **SCAN** button again to stop the function and return to the original setting.

2. Downloading information

When the receiver and transmitter are connected by a cable via the **USB** ports. Pressing the **SCAN** button will activate the **DOWNLOAD** function. Frequency, User Name, User / Preset Mode and Edit information will be downloaded from the receiver to the transmitter.

The functions of USB port

Every receiver and transmitter has a mini **USB** (Universal Serial Bus) port. This **USB** port has two functions:

1. Function as a charging port.

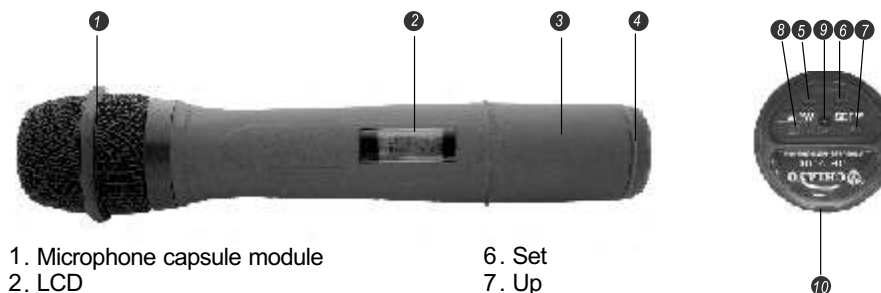
When a designated cable with both ends equipped with mini **USB** jacks is connected between the receiver and the transmitters UH-2000 or UM-2000, the receiver will provide the current to charge the transmitter batteries. Make sure the receiver is on and the batteries used are rechargeable type. The LCD panel of the receiver has a designated charging icon, which will be flashing during the charging process. On the transmitter, the battery icon will display the battery status.

2. Downloading information

When the receiver and transmitter are connected via a cable at the **USB** port. Pressing the **SCAN** button will activate the **DOWNLOAD** function. Information such as Frequency, User Name, User / Preset Mode and Edit information will be downloaded from the receiver to the transmitter.

Handheld Transmitter : UH-2000(UHF)

Parts and functions



- | | |
|--|------------------|
| 1. Microphone capsule module | 6. Set |
| 2. LCD | 7. Up |
| 3. Battery compartment | 8. Down |
| 4. Rotating protective cap for controls
(also serves as color identification cap) | 9. Charging port |
| 5. Power control | 10. Name plate |

Changing of capsule

First unscrew the metal grill from the housing and take out the capsule to be replaced. Then insert a new capsule. Either dynamic or condenser type can be chosen from location to location.



Battery installation

UH-2000 microphone requires 2 pieces of " AA " size batteries to operate. Please insert the batteries according to the correct polarity as indicated.



Caution

Many batteries are known to have leakage problem of conductive and corrosive liquid. Please observe the rule to remove the batteries if they are not to be used for a longer period.

Due to various unstandardized sizes (diameters) of " AA " batteries, this battery compartment is designed to accommodate the most common Alkaline batteries only.