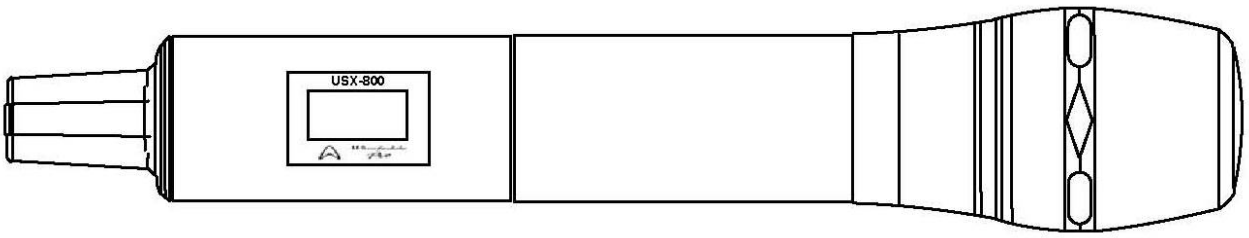
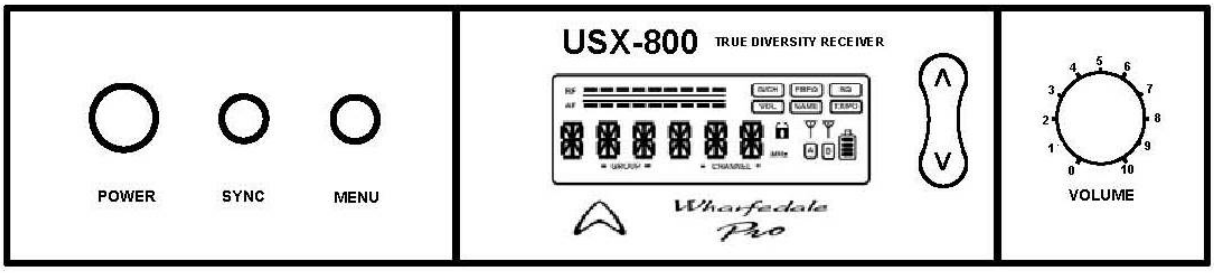
Wharfedale Pro

Wireless Microphone





Wharfedale Pro USX-800 - Single Channel Wireless Microphone System

Preliminary Wireless Microphone User Manual

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Wharfedale Professional Limited Warranty: The USX-800 Wireless Microphone System is warranted to be free of manufacturing or materials defects for a period of one year from the original date of purchase. In the event of warranty related malfunction, contact your authorised Wharfedale Professional dealer or distributor. Be aware that warranty details differ from country to country.

WARNING: DUE TO THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOSITURE.

Unpacking: All Wharfedale Pro products are fully tested before leaving the factory. After unpacking**,** please inspect the unit**.** In the event of any noticed damage due to shipping, contact your dealer and the shipping provider immediately to file a shipping damage claim. Retain the shipping carton and all packaging material in case the unit needs to be returned.

!WARNING! – Read all operating instructions that accompany this product!

!WARNING! – Do not attempt to open the unit! This unit is not user serviceable!
Refer all servicing to qualified electronic service personnel only!

NOTE:

This is a preliminary manual for the Wharfedale Pro USX-800 Wireless Microphone System.

The final manual, when available, will be posted on our website at: www.wharfedalepro.com

Wharfedale Pro USX-800 Wireless Microphone System

Thank you for selecting the Wharfedale Pro USX-800 single channel wireless microphone system!

Before operating the system, please read this instruction manual thoroughly for a complete understanding of the product features and correct operating procedures

System inventory

- (1) Injection molded carrying case
- (1) USX-800 True Diversity Receiver
- (1) USX-800 Wireless Transmitter / Microphone
- (2) Screw on antenna assemblies
- (1) Power supply / power cord
- (2) AA batteries
- (1) Unbalanced line cable with ¼" plugs
- (1) Rack Mount Adapter
- (1) User manual
- (1) Warranty Registration card

Parts names and functions

-Front panel (Fig.1)

1. POWER switch

2. SYNC button: Synchronization of transmitter & receiver.
(Automatic Channel Matching)

3. MENU button: Multiple function selection.

4. SYNC I/R receiver: Works with the microphone transmitter SYNC signal

5. LCD Display: Shows currently selected function parameter

6. Group Select button: Changes group setting parameter.

7. Channel Select button: Changes channel setting parameter.

8. VOLUME Control: Adjusts output volume level.

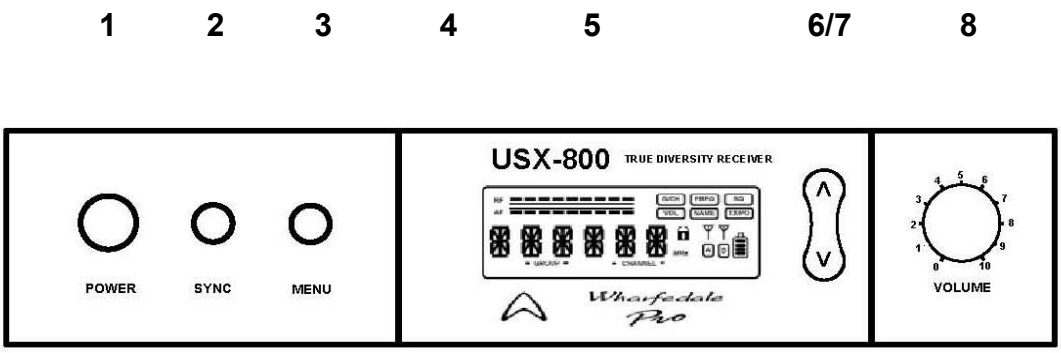


Fig. 1

-Rear panel (Fig.2)

9. ANTENNA B connector

10. Output '**LEVEL**' Switch: "**MIC**" selection when the output is connected to a microphone input of a mixer, "**LINE**" selection when the output is connected to a line level input of a mixer.

11. BALANCED OUTPUT XLR connector

12. UNBALANCED OUTPUT ¼" jack .

13. DC INPUT 12V power input jack.:

14. ANTENNA A Connector

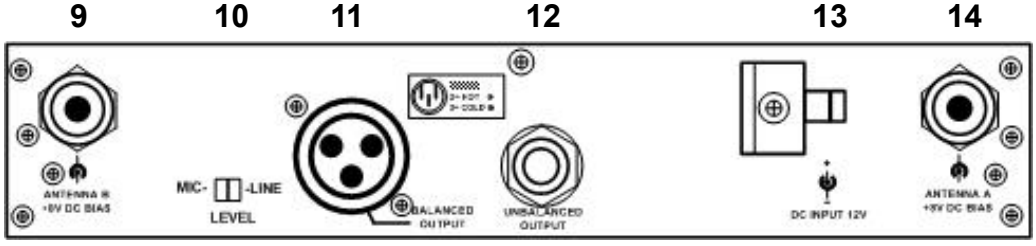


Fig. 2

Setup

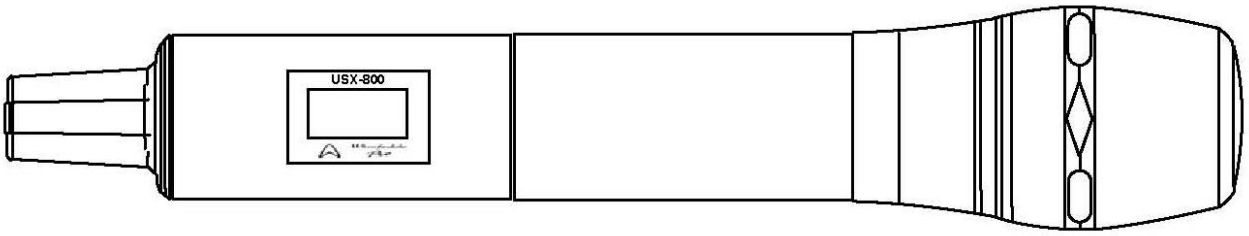


Fig.3

Transmitter / Microphone (Fig.3)

-Install the provided “AA” batteries in the microphone battery compartment (**Fig.4 / 5**) by holding the main barrel of the microphone firmly while turning to unscrew the transmitter section (the portion with the LCD display) and slide it open to reveal the battery compartment in the middle section of the mic.

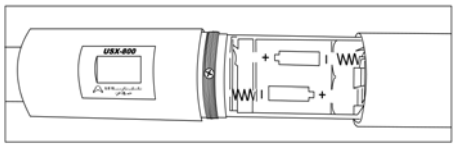


Fig.4

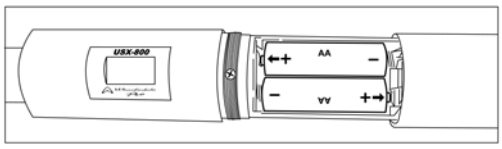


Fig.5

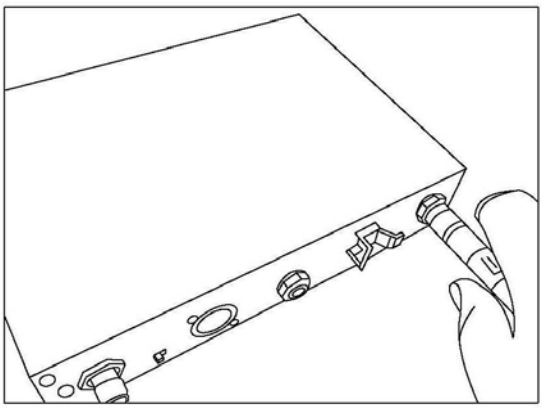
-Once the batteries are installed and the battery compartment is closed and tightened, switch the microphone ON (the “**I**” setting on the small switch at the end of the microphone barrel) to verify proper battery installation. The red LED on the mic should illuminate and the LCD display on the mic will become active.

-Turn the microphone off (the ‘**0**’ switch setting at the end of the microphone barrel) before proceeding.

Installation of the Receiver

Receiver

-Connect the antennas into **ANTENNA A** connector (**14**) and **ANTENNA B** connector (**9**) at the rear of the USX-800 Receiver as shown below. (**Fig 6/A**). Rotate and flip the antennas to the upward position as shown in **FIG.6-B**.



Fig, 6A

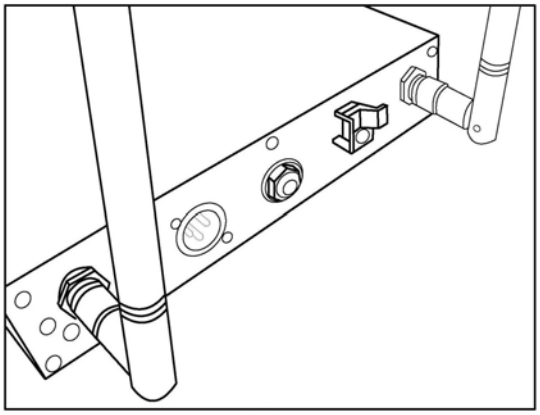


Fig. 6B

Connecting the power:

Connect the AC/DC adapter cable to the **DC INPUT 12V** socket (**13**) as shown in **Fig.7**. Connect the other end of the cord to the AC source voltage outlet. (Caution: The specification of the adapter should be compatible with the voltage specification for the local power source voltage.)

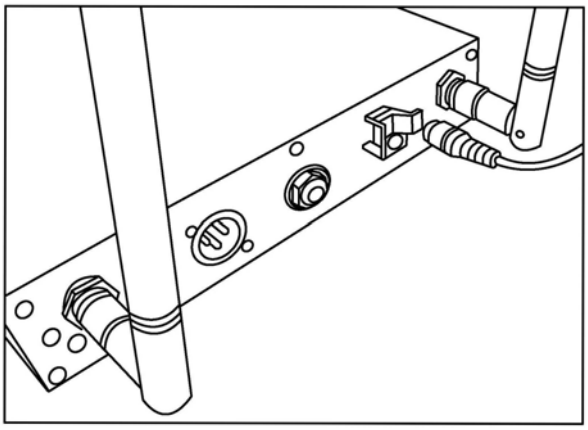


Fig.7

Audio Output Connections:

-Select the '**LINE**' position of the '**LEVEL'** switch (**10**) when the output of the receiver is connected to the line level input of a mixer or amplifier. Select the '**MIC**' position of the '**LEVEL**' switch (**10**) when the output of the receiver is connected to a microphone level input of a mixer. Overload conditions may occur if the '**LEVEL**' switch is set to the wrong position.

-The '**BALANCED OUTPUT**' **(11)** should be used when the receiver is going to be connected to either a microphone or line level, balanced input of a mixer.
Excessive cable length for a balanced connection is generally not a problem.

-The '**UNBALANCED OUTPUT'** (**12**) should be used when the receiver is going to be connected to the ¼" input jack of a mixer or an amplifier (usually line level) that uses a ¼" phone plug. Use the appropriate setting on the '**LEVEL**' switch (**10**) on the rear panel of the USX-800. Cable length for this type of connection should be limited to less than 15 feet (5 meters).

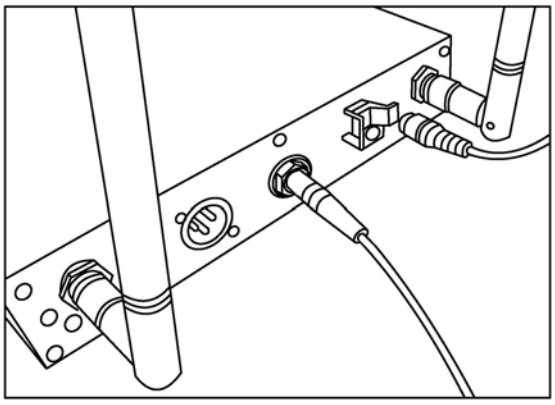


Fig.8

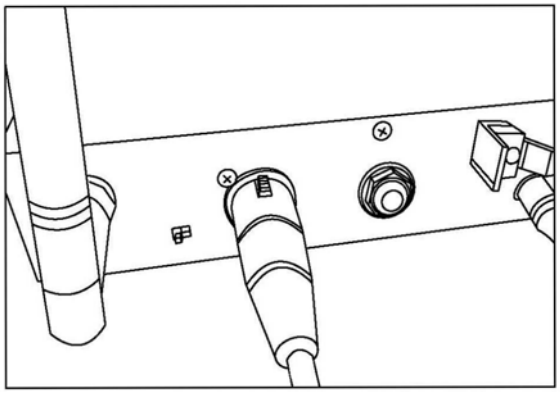


Fig.9

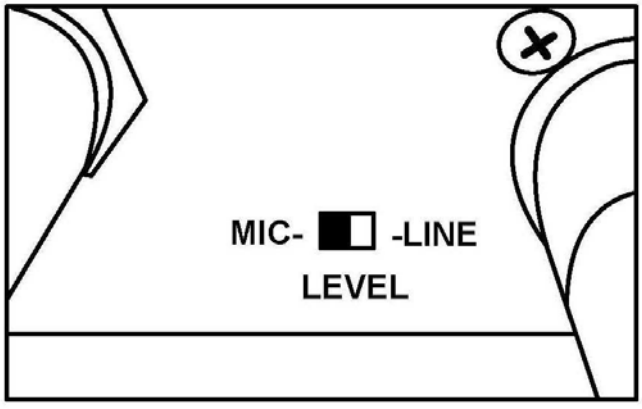


Fig.10

Receiver Settings

-In accordance with the operating instructions of the sound system's mixer, adjust the appropriate mixer settings and gradually increase the '**VOLUME**' knob (**8**) on the USX-800 receiver to achieve a suitable level setting of the microphone signal.

-Verify that the '**VOLUME**' control setting is at its minimum (fully counterclockwise).

-With the microphone still turned OFF, Press and hold the '**POWER**' button (**1**) on the front panel of the receiver until the LED display lights up.

-Once the display is fully illuminated, press the '**MENU**' button (**3**), repeatedly, until the "G/CH" icon is highlighted. The display will read the currently selected "GROUP" number and "CHANNEL" number. These settings can be changed with the UP/DOWN buttons. It is not necessary to change these settings in order for the system to work, but they can be changed if any signal interference is experienced. See the Appendix for Group/Channel/ Frequency assignments.

-To change the "GROUP" setting, press the "up" button (**6**) (next to the '**VOLUME**' knob) repeatedly until the desired "GROUP" number is displayed. There are 9 Groups available.

-To change the "CHANNEL" setting, press the "down" button (**7**) (next to the VOLUME knob) repeatedly until the desired "CHANNEL" number is displayed. See the Appendix for Group/Channel correlations.

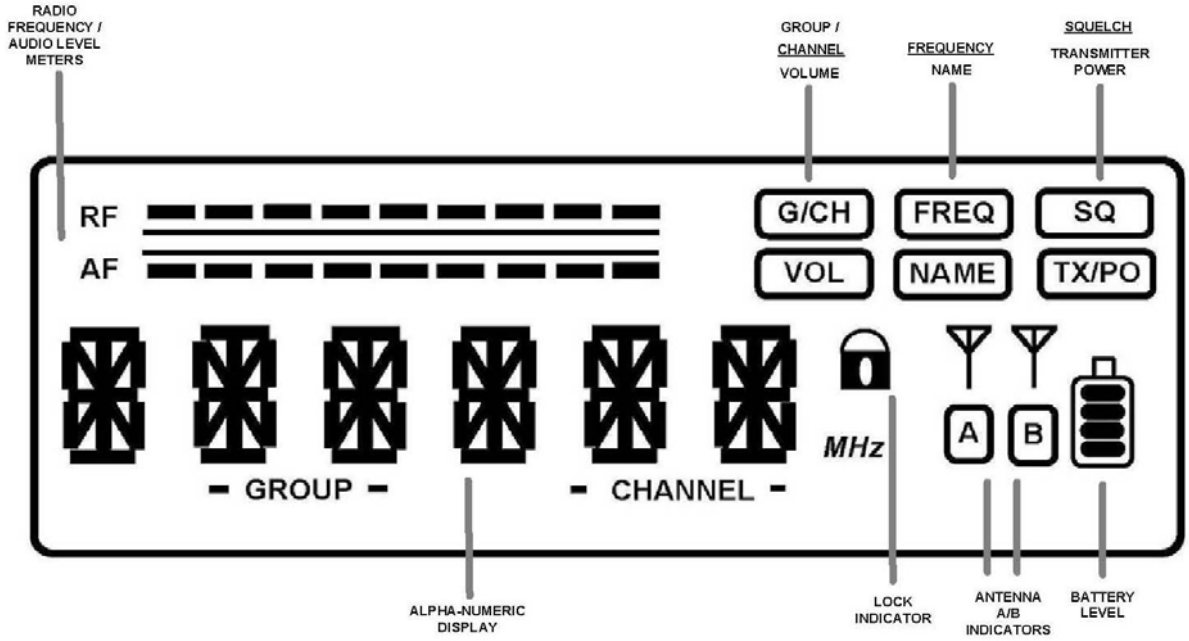
-Once these settings are made, turn the microphone on and press the '**SYNC**' button and the receiver will automatically synchronize with the microphone transmitter at the selected Group/Channel frequency assignment. The synchronization is successful when the "**RF**" level meter shows a signal indication. The "**AF**" meter will respond to any sounds being picked up by the microphone. Speaking into the mic should show significant audio level indications on the "**AF**" meter. Other indications on the receiver's display will also indicate "**TX**" (transmit) and one of the "**A**" or "**B**" antenna indicators will be highlighted showing which antenna has been automatically selected for the strongest reception.

LOCK / UNLOCK function:

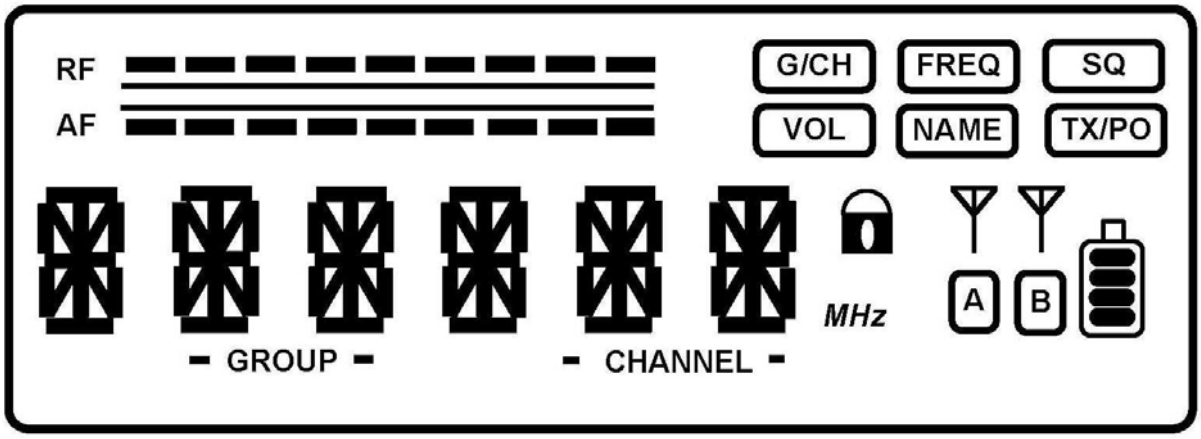
-Holding the '**MENU'** button down for more than 3 seconds will result in the word "**LOCK**" being displayed on the LCD panel. This function stores the unit's settings at the currently selected configuration. When the unit is in "**LOCK**" mode, holding the '**MENU**' button for 3 seconds will toggle the function back to the "**UNLOCK**" mode and parameters can be changed.

The lock icon: will be displayed when the "**LOCK**" function is active.

LCD DISPLAY LEGEND



Display Modes:



_Pressing the '**MENU**' button repeatedly will change the information displayed in the alpha-numeric section of the LCD panel showing the five display modes available:

-**GROUP/CH**

-**FREQ** (Frequency)

-**SQ** (Squelch)

-**VOL** (Mute)

-**NAME** (Name) will be highlighted in the display with each press of the 'MENU' button

Function Descriptions:

G/CH – Group / Channel:

This allows for the selection of the Group and the Channel assignment to match the wireless microphone transmitter being used with the receiver. 9 Groups and 4 Channel selections are available. The Up button selects the Groups, the Down button selects the Channel

FREQ – Frequency:

This displays the automatically selected frequency.

SQ – Squelch:
This adjusts the level of “squelch” (0-99) which can minimize transmission/reception noise between the microphone transmitter and the receiver. Level is selected with the Up/Down button.

VOL – Volume:
This mutes and un-mutes the output of the audio from the receiver when either the Up or Down button is depressed

NAME – Name:
This allows for the custom naming of the microphone and receiver for easy identification. Use the Up/Down buttons to select the desired letters/numbers. Press the ‘MENU’ button to scroll through the 6 available characters. The name will be set after the sixth character is entered and the ‘MENU’ button is pressed..

LOCK – : This function locks system settings and the following icon is displayed when active:

(To unlock, hold the “MENU” button for 3 seconds)

Battery status

The following indications relate to the battery level of the two “AA” batteries in the microphone / transmitter:

It is recommended that batteries be changed if the 25% display is active.

Specifications

Microphone / Transmitter Specifications

Housing Material	**Aluminum Extrusion**
Oscillation Mode	**PLL Synthesized**
Carrier Frequency Range	**UHF 740-752MHz**
Stability	**±0.005%(-10/50 ㅣㅣ)**
Frequency Adjustment	**Automatic Channel Setting**
RF Output Power	**<10mW**
Spurious Emissions	**<-55dBc**
Max. Deviation Range	**±68KHz**
Maximum Input Level	**140dB SPL**
Battery	**1.5V (AA)×2**

Receiver Specifications

Signal to Noise Ratio	**>105dBA**
Total Harmonic Distortion	**<0.5% at 1KHz**
Frequency Response	**50Hz~18KHz ±3dB**
Functional Distance	**>100meters (Open area distance)**
Main Frame Size	**EIA standard 1/2-rack unit**
Channels	**Single-channel**
Receiver Module	**True Diversity**
Oscillation Mode	**PLL synthesized**
Carrier Frequency Range	**UHF 780-793MHz**
Stability	**±0.005%(-10-50 ^{O}C)**
Bandwidth	**13 MHz**
Sensitivity	**2μV (S/N>12dB 25KHz deviation)**
Frequency Interval	**250KHz**
Available Frequencies	**50**
Squelch Innovative	**PiloTone & NoiseLock dual-squelch circuit**
Maximum Output Level	**MIC LEVEL-14dBV/100Ω, LINE LEVEL-4dBV/5KΩ**
Output Connectors	**XLR balanced & ¼”/6.3mm unbalanced phone jack.**
AC Power Supply	**External 90-260VAC**
DC Power Supply	**1A, 12-15VDC**
Dimensions: Inches/ mm	**1.7”(H)x8.6”(W)x6.3”(D) / 44(H)×220(W)×160(D)**

Product details and specifications subject to change without notice.

Regulatory and Licensing

Information

The USX-800H transmitter complies with FCC part 74 rules. Meets the essential requirements of the European R&TTE Directive 99/5/EC (ETSI EN 300-422 Part 1 & 2, EN 301 489 Parts 1 & 9.) and eligible to carry the CE mark.

The USX-800 receiver complies with FCC part 15 rules. Meets the essential requirements of the European R&TTE Directive 99/5/EC (ETSI EN 300-422 Part 1 & 2, EN 301 489 Parts 1 & 9.) and eligible to carry the CE mark.

NOTES:

THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT.
SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

APPENDIX

USX-800 WIRELESS FREQUENCY MATRIX (F06 code) (MHz)				
GROUP / CHANNEL	1	2	3	4
1	740.125	740.125	740.125	740.125
2	741.500	741.950	741.225	740.800
3	743.375	743.500	742.925	741.825
4	744.600	745.675	744.325	743.075
5	746.325	747.400	745.425	745.125
6	748.500	748.625	746.875	746.675
7	750.050	750.500	748.925	747.675
8	751.875	751.875	750.175	749.075
9			751.200	750.775
10			751.875	751.875

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