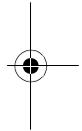
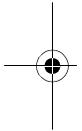


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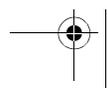
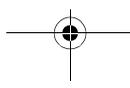
OWNER'S MANUAL

Please read before using this equipment.

2-Channel 170-MHz Wireless FM Microphone System



OPTIMUS[®]



FEATURES

Your Optimus 2-Channel 170 MHz Wireless FM Microphone System is designed for use with public address systems, musical instrument amplifiers, or other audio systems. The system's long range (about 150 feet) lets you use it anywhere you would use a conventional microphone. Its features include:

Two Handheld Microphones — with each microphone on a separate channel, two people can speak or perform at the same time without microphone interference.

Separate Volume Controls — let you easily balance the system receiver's output with other sound sources.

Compander Noise Reduction — improves the signal to give you the best possible sound.

Audio and Line Outputs — let you easily connect to any amplifier, mixing board, or recorder, and you can use both outputs at the same time.

Standby Switch — lets you turn off the microphone without turning off the microphone's transmitter, thus avoiding a loud pop when you turn the microphone back on.

Low Battery Indicator — helps you avoid last-minute battery failures.

WARNING: To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture.

	CAUTION RISK OF ELECTRIC SHOCK. DO NOT OPEN.	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.		



This symbol is intended to alert you to the presence of uninsulated dangerous voltage within the product's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the product's case.



This symbol is intended to inform you that important operating and maintenance instructions are included in the literature accompanying this product.

FCC NOTICE

This wireless microphone system complies with Part 90 of *FCC Rules*. There are two frequencies available for the system. You must get a license for each frequency you plan to use before you use the system (one license can include both frequencies). Licensability depends on how you will use the system.

Look in your local phone book for the nearest FCC office and contact them to get the necessary application.

SETTING UP THE SYSTEM

Your system has two channels for transmitting. Each microphone has a sticker with a letter on it to help you determine which microphone is which. Microphone 1 (MIC 1) is marked **A**, **D**, or **B**. Microphone 2 (MIC 2) is marked **E**, **G**, or **H**. You can combine up to three separate systems so you can use up to six microphones together (each with a different frequency).

Installing the Transmitter's Battery

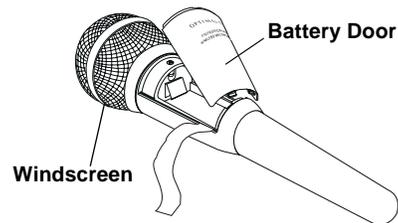
Each microphone transmitter requires a 9-volt battery (not supplied) for power. For the best performance and longest life, we recommend an alkaline battery, available at your local RadioShack store.

Cautions:

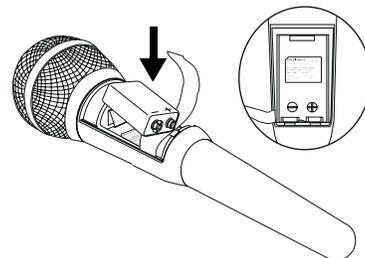
- Use only fresh batteries of the required size and recommended type.
- Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

Follow these steps to install each battery.

1. While holding the microphone's handle, carefully unscrew the windscreen far enough to remove the battery door.

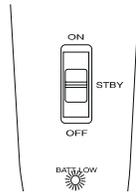


2. Install the battery into the battery compartment on top of the ribbon, being sure the + and - terminals touch the appropriate contacts as marked inside the compartment. Be sure to firmly press the battery in place.



3. Replace the battery compartment cover and tighten the windscreen.

If the battery power is low, the red BATT LOW indicator lights when the microphone's switch is set to **ON** or **STBY** (standby). Replace the battery.



Warning: Dispose of old batteries promptly and properly. Never burn or bury them.

Caution: If you do not plan to use the microphone for a week or more, remove the battery. Batteries can leak chemicals that can damage electronic parts.

Connecting the Receiver to an Amplifier, Mixer, or Tape Recorder

Connect the receiver to an amplifier, mixer, or tape recorder using either the receiver's **LINE** or **AUDIO** output jack.

To use the **LINE** jack, connect a shielded audio cable's phono plug to the receiver's **LINE** jack. Connect the other end to a line-level input on your amplifier, mixer, or tape recorder.

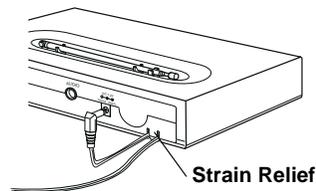
To use the **AUDIO** jack, connect a shielded audio cable's mono 1/4-inch phone plug to the receiver's **AUDIO** jack. Connect the other end to a microphone-level input on your amplifier, mixer, or tape recorder.

Connecting the Power Adapter

The receiver operates from standard AC power, using the supplied 12-volt DC power adapter.

Cautions:

- Use only the supplied adapter. If you lose or damage this adapter, order a replacement from your local RadioShack store. Using other adapters could damage the receiver.
 - Always plug the adapter into the receiver before you plug it into the AC outlet. Always unplug the adapter from the outlet before you unplug it from the receiver.
1. Turn off the receiver by pressing **POWER** until the button is in the outmost (off) position.
 2. Plug the adapter's barrel plug into the receiver's **DC 12V** jack, then route the cord through the strain relief.



3. Plug the adapter into a standard AC outlet.

OPERATION

Note: Leave the microphone's slide switch set to **STBY** or **ON** whenever the receiver is on. This keeps the system from producing a loud hiss.



1. Fully extend the receiver's antenna.
2. Turn on your tape recorder, amplifier, mixing board, and other necessary audio components. Set their volume controls (or input level controls) to moderate settings.
3. If you plan to use both wireless microphones, turn both the receiver's **MIC VOLUME** controls clockwise until they click on. (If you plan to use only one microphone, turn on only the appropriate control.) Position each control at its lowest setting.
4. Press **POWER** to turn on the receiver. The power indicator lights.
5. Set the microphone transmitter's slide switch to **STBY** or **ON**. The receiver's MIC 1 or MIC 2 indicator lights, depending on which microphone you turn on. If your microphone is marked **A**, **D**, or **C**, the

MIC 1 indicator lights. If your microphone is marked **E**, **G**, or **H**, the MIC 2 indicator lights.

6. If you are using a separate audio source (such as a tape deck or CD player) with your audio system, turn on the audio source and adjust the receiver's **MIC VOLUME** controls for the best volume and balance.

Note: For the best results, experiment with the receiver's **MIC VOLUME** settings and the volume settings of other components in your audio system. If you are using a source that has a variable output control, such as a musical instrument, be sure you adjust the volume with the instrument at the highest level you intend to use.

Using the Standby Setting

The microphone transmitter's **STBY** setting lets you turn off the microphone without turning off its transmitter. If you move the switch from **OFF** to **STBY** or **ON**, you will hear a loud pop. Use the **STBY** setting to avoid this sound. There should be virtually no sound when you slide the switch from **STBY** to **ON**.

If you set the switch to **OFF** while your audio system is on, there may be a loud hiss. There is no hiss when you set the switch to **STBY**.

To conserve battery power, be sure to set the switch to **OFF** when you finish using the microphone transmitter.

CARE AND MAINTENANCE

Your Optimus 2-Channel 170 MHz Wireless FM Microphone System is an example of superior design and craftsmanship. The following suggestions will help you care for your system so you can enjoy it for years.



Keep the system dry. If it gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.



Use and store the system only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.



Keep the system away from dust and dirt, which can cause premature wear of parts.



Handle the system gently and carefully. Dropping it can damage circuit boards and cases and can cause the system to work improperly.



Use only fresh batteries of the required size and recommended type. Batteries can leak chemicals that damage your system's electronic parts.



Wipe the system with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the system.

Modifying or tampering with the system's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate it. If your system is not performing as it should, take it to your local RadioShack store for assistance.

SPECIFICATIONS

Transmitter

Sensitivity:

Microphone Input 100 dB SPL \pm 5 dB
 Frequency Response 100–8,000 Hz
 RF Output Power 18 mW
 (Terminated at 50 Ohm Load)

Current Consumption 38 mA (Average)

Battery Life (Alkaline) 8 Hours (Average)

Operating Frequencies:

Groups	Microphone 1	Microphone 2
1	A — 169.445 MHz	E — 171.045 MHz
2	D — 170.305 MHz	G — 171.845 MHz
3	B — 169.505 MHz	H — 171.905 MHz

Receiver

Sensitivity 2 μ V (with S/N @ 20 dB)

S/N Ratio (@ 1mV Input) 82 dB, A-Weighted

Output Power:

LINE 250 mV

AUDIO 16 mV

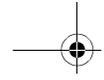
Total Harmonic Distortion 1.0% (Typical)

Power Requirements 12 Volts DC, 100 mA

Operating Frequencies:

Groups	Microphone 1	Microphone 2
1	A — 169.445 MHz	E — 171.045 MHz
2	D — 170.305 MHz	G — 171.845 MHz
3	B — 169.505 MHz	H — 171.905 MHz

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.



Limited One-Year Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow the limitations on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

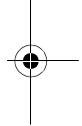
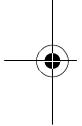
This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, 200 Taylor Street, 6th Floor, Fort Worth, TX 76102

We Service What We Sell

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