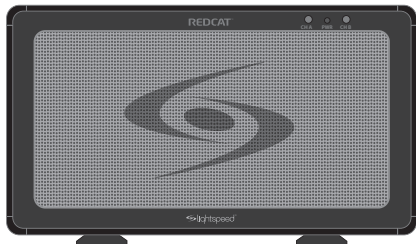


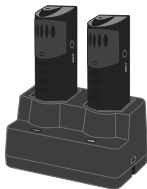


REDCATTM



Classroom Audio System

User Manual



IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use the apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

IMPORTANT SAFETY INSTRUCTIONS CONT'D

11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. When the mains plug or appliance coupler is used as the disconnect device, it shall remain readily operable.
16. Please keep the unit in a good ventilation environment.

TABLE OF CONTENTS

SECTION 1:	7	System Components and Unpacking
Overview	9	Optional Components
	12	Front Panel Indicators
	13	Top Panel Controls
	14	Side Panel Controls and Connections
	16	Rear Panel Controls and Connections
	18	REDMIKE Controls and Connections
	22	Cradle Charger Controls and Connections
 SECTION 2:	 24	 Step 1. Determine Set-up Location
Set-up & Use	25	1A. <i>To Set-Up on Table Top</i>
	27	1B. <i>To Set-Up Mounted on a Wall</i>
	30	1C. <i>Wall Mounting Locations</i>
	31	Step 2. Audio Integration
	35	Step 3. Connecting the Power Supply

TABLE OF CONTENTS CONT'D

SECTION 2:	36	4. Charging the REDMIKE
Set-up & Use Cont'd	38	Operating the REDMIKE
	41	Output to Assistive Listening Device (ALD)
	43	Using REDMIKE as Wireless Audio Link
 SECTION 3:		
Optional Accessories	46	Optional REDMIKE VC Controls and Connections
	49	REDMIKE VC: Charging
	49	REDMIKE VC: Initial Set-up
	52	REDMIKE Share: Controls and Connections
	52	REDMIKE Share: Charging
	53	REDMIKE Share: Initial Set-up
	54	Initial Set-up: Optional IRLC Media Connector
	56	Optional IRLC Media Connector Audio Integration
	58	Optional Accessories

TABLE OF CONTENTS CONT'D

SECTION 4:	59	Common Problems and Solutions
Troubleshooting	62	Tips to Obtain Optimum Audio Performance Output to Assistive Listening Device (ALD) Using the REDMIKE to Amplify External Audio Equipment
SECTION 5:	63	Five-Year Limited Warranty
Warranty, Safety & Specifications	65	Safety Warnings and Certifications
	69	System Specifications

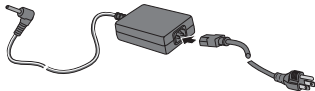
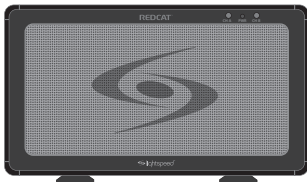
SECTION 1:

OVERVIEW

SYSTEM COMPONENTS AND UNPACKING

The standard configuration of the REDCAT® will contain:

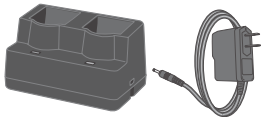
REDCAT® Infrared
Receiver/Amplifier
with Table Stand and
Power Supply



SYSTEM COMPONENTS AND UNPACKING CONT'D

The standard configuration of the REDCAT will contain:

Charging
Cradle and
Power Supply



REDMIKE®
Classroom
Microphone



OPTIONAL COMPONENTS

Optional equipment which may be part of your REDCAT system:

REDMIKE® VC
Volume Control
Microphone



REDMIKE® Share
Handheld Mic &
Charger Cable



STANDARD COMPONENTS

Standard Components

RC2	REDCAT all-in-one receiver/amplifier/speaker with power supply
24V-1.75-NA	Power supply for REDCAT
RMT2	REDMIKE classroom microphone with lavalier cord and rechargeable AA battery
NH2A27	Lightspeed AA rechargeable sensing battery (for REDMIKE)
AC-RMLC2	Lavalier cord for REDMIKE
BC-RMCC	REDMIKE cradle charger
5V-1.0-NA	Cradle charger power supply

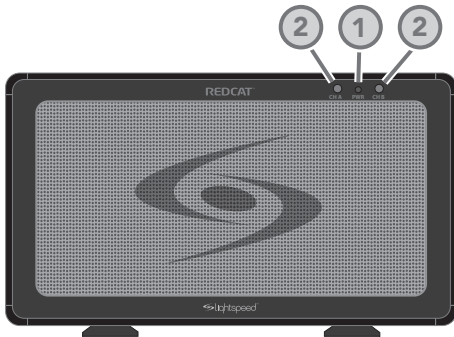
OPTIONAL COMPONENTS

Optional Components

RMV2	REDMIKE VC microphone with battery
RMS2	REDMIKE Share handheld microphone with battery pack
NH2APK	NiMH rechargeable battery pack for REDMIKE Share
LT71	LightMic microphone with batteries
IRMC2	Infrared media connector with cables and power supply
AC-WMKRC2	REDCAT wall mounting kit includes screws, wall anchors, security clip and extra RC feet
NH1	AA NiMH rechargeable battery (LT71)

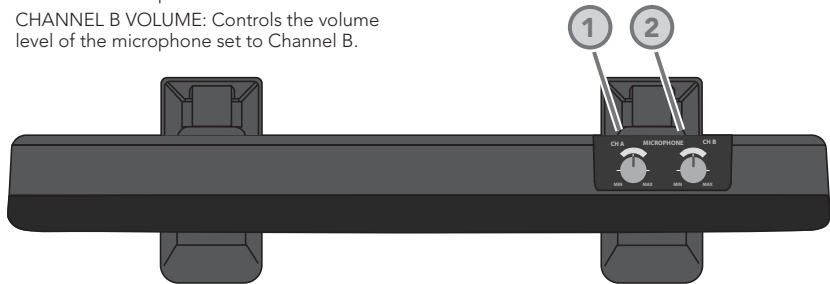
FRONT PANEL INDICATORS

1. **POWER ON INDICATOR:** The power LED will glow Blue when power is applied.
2. **CH A & CH B:** Illuminate Red when the audio for the corresponding microphone is received.



TOP PANEL CONTROLS

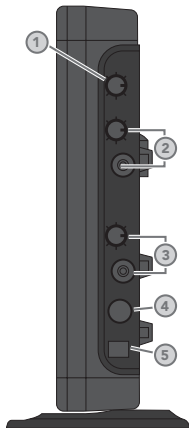
1. CHANNEL A VOLUME: Controls the volume level of the microphone set to Channel A.
2. CHANNEL B VOLUME: Controls the volume level of the microphone set to Channel B.



SIDE PANEL CONTROLS AND CONNECTIONS

- 1. TONE CONTROL:** Adjusts the audio level for optimum sound quality.
- 2. AUDIO INPUT VOLUME CONTROL & INPUT JACK:** 3.5mm stereo connector for connecting classroom audio sources to the REDCAT. Controls the volume level of the audio input from the connected audio source.
- 3. AUDIO OUTPUT VOLUME CONTROL & INPUT JACK:** 3.5mm stereo connector for connecting to an assisted listening device (ALD) or to a computer for recording. Controls the volume level of the audio output.
- 4. POWER SWITCH:** This switch is used to turn the REDCAT ON or OFF. The front panel Blue LED lights when power is ON.
- 5. DC POWER INPUT JACK:** Plug the power supply (24V/1.75A) into this jack.

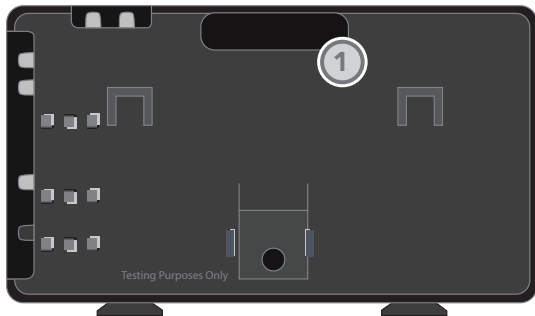
SIDE PANEL CONTROLS CONT'D



REAR PANEL CONTROLS AND CONNECTIONS

1. **CARRYING INSET:** Cutaway grip for moving or carrying the REDCAT.
2. **CABLE MANAGEMENT AND STRAIN RELIEF**

REAR PANEL CONTROLS AND CONNECTIONS CONT'D



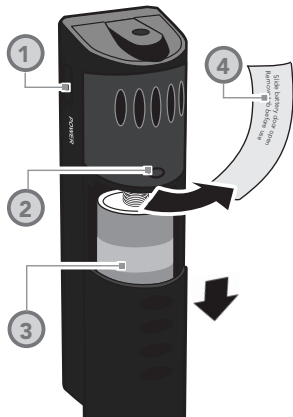
REDMIKE CONTROLS AND CONNECTIONS

- 1. POWER BUTTON:** Press this button to turn the REDMIKE ON, press again to turn it OFF (mute).
- 2. POWER/LOW BATTERY INDICATOR:** A BLUE light indicates the REDMIKE is on and fully charged. A RED light indicates a charge is needed.
- 3. Battery Compartment:** To access the battery compartment, slide the door downward. The battery should only be replaced by a Lightspeed AA rechargeable sensing battery (part # NH2A27).

- 4. YELLOW PROTECTIVE TAB:** Slide the battery compartment door open to remove this disposable protective tab before use. NOTE: do not attempt to remove the tab without first opening the compartment door, as it may tear, leaving fragments.

Note: REDMIKE microphones are shipped with batteries installed. Charge the microphone overnight before using.

REDMIKE CONTROLS CONT'D



REDMIKE CONTROLS CONT'D

5. AUDIO/MICROPHONE INPUT: Use this input to plug in a laptop, MP3 player or other audio source to wirelessly transmit audio to be played through the system. Alternatively, an external microphone can be connected.

6. CHANNEL SELECT SWITCH (CH A/B): This switch allows for selection between Channel A or B. If you are using a single microphone, we recommend using Channel A.

7. Charger Contacts (+ -): These contacts interface with the charging tabs in the BC-RMCC cradle charger for daily charging. Simply place the REDMIKE in the charger.

8. Group Designation:

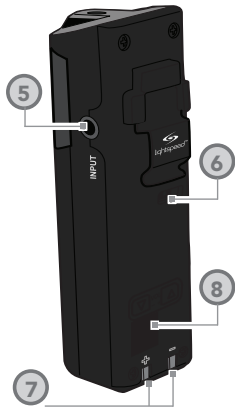
G1= Group 1 frequencies

2.06/2.54 MHz

G2= Group 2 frequencies

3.20 / 3.70 MHz

REDMIKE CONTROLS CONT'D



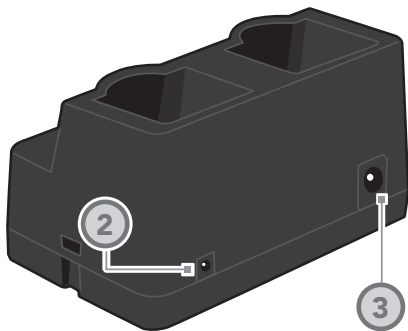
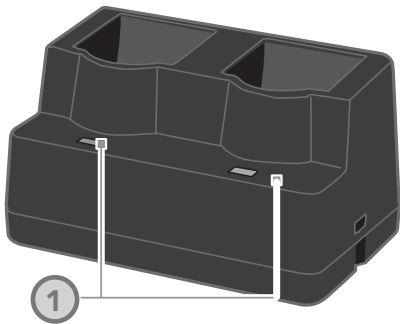
CRADLE CHARGER CONTROLS AND CONNECTIONS

1. CHARGE INDICATORS: The light glows RED while the REDMIKE is charging. When fully charged, the light will glow GREEN. A blinking RED light indicates that no battery is sensed, (REDMIKE Yellow Protective Tab may not have been completely removed—see page 18, item 4.) A blinking Green LED means a non-Lightspeed battery has been installed (possibly an alkaline battery).

2. DC POWER INPUT: Connect the 5V/1.0A DC power supply here.

3. OPTIONAL CHARGING PORT: Plug the charging cord for the optional LT71 or the REDMIKE Share microphones here.

CRADLE CHARGER CONTROLS AND CONNECTIONS CONT'D



SECTION 2:

SET-UP & USE

1. DETERMINE SET-UP LOCATION

The REDCAT is shipped with feet to stand on a cabinet or tabletop. Alternatively, the feet can be used as the wall mount bracket.

Advantages of either include:

Tabletop (recommended):

- Virtually no setup time
- Greater flexibility to move to different locations

Wall-mount:

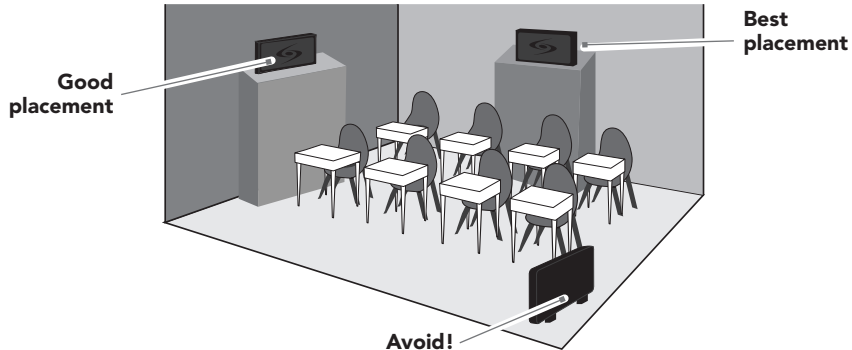
- More permanent setup
- Greater security

1A. TO SET-UP ON TABLE-TOP

First, consider that the REDCAT should be placed within 7 feet of an electrical outlet and on a surface about 3-6 feet off the ground.

Next, find a location as far away as possible from the teacher who will be using the mic. The best place is against the wall opposite where the teacher will be speaking. If this is not possible, other good locations are along either wall next to the teacher or in a corner. Avoid placing the REDCAT next to where the teacher instructs. Putting the REDCAT in close proximity to the teacher's mic can result in feedback.

1A. TO SET-UP ON TABLE-TOP CONT'D



1B. WALL MOUNTING PROCEDURE

For wall-mounting the REDCAT System: To hang the system on a wall, drill these four holes.

REQUIRED MATERIALS

- Drill Bit: 1/4" Drill Bit
- Anchors: Needed for mounting on drywall
- Screws: wood screws or screws appropriate for anchors

MOUNT

- 6-8' above the floor. Locate within 7 ft of a wall outlet.

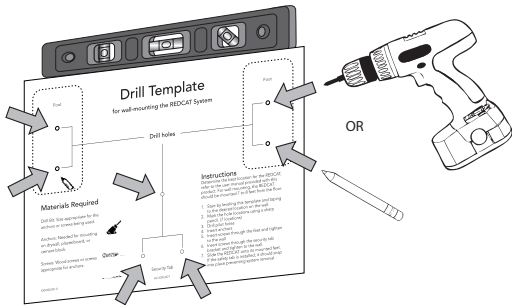
LOCATION

- Find a location as far away as possible from the teacher who will be using the mic. The best place is centered on the long wall opposite the teacher. Avoid placing the REDCAT on any wall close to where the teacher usually stands to instruct the class. Having the teacher's mic too close to the REDCAT can result in feedback.

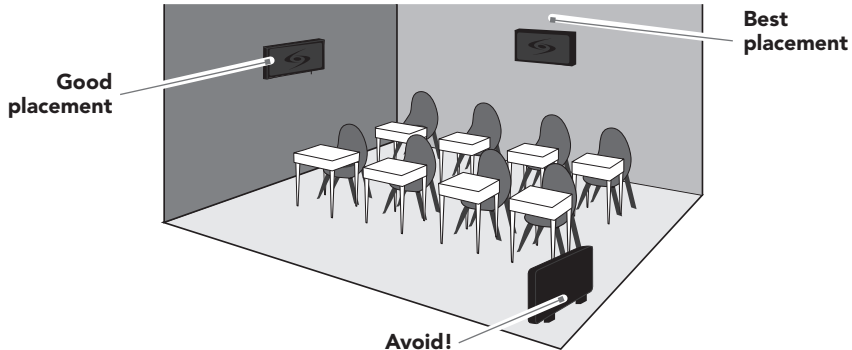
1B. WALL MOUNTING PROCEDURE CONT'D

INSTRUCTIONS

1. Level template and tape to wall
2. Mark position of drill holes on wall
3. Drill pilot holes
4. Insert anchors
5. Insert screws through the REDCAT feet into the anchors
6. If using optional security bracket, mount on wall using the provided screws and anchors
7. Slide the REDCAT onto the wall mounted feet



1C. WALL MOUNTING LOCATIONS



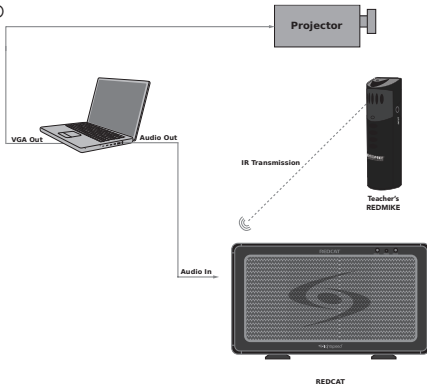
2. AUDIO INTEGRATION

The next step in setting up your REDCAT system is to connect it to the other elements of your audio system. Audio systems have varying elements – you may have a computer, television, DVD/VCR player, a visual projection system or other devices. In this section you will find instructions on how to connect an external audio device like a TV, VCR, DVD, MP3 or computer directly into the REDCAT.

2. AUDIO INTEGRATION CONT'D

Audio Input

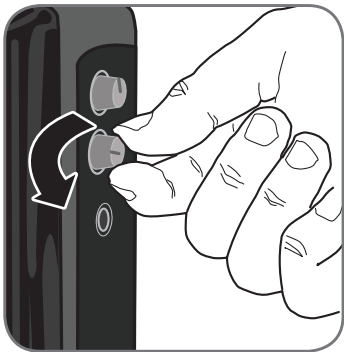
The REDCAT has one audio input with volume control for connecting to classroom audio sources. Use a 3.5 mm to 3.5 mm patch cable (MSC3535) to connect a computer, iPod, iPad, etc. audio sources.



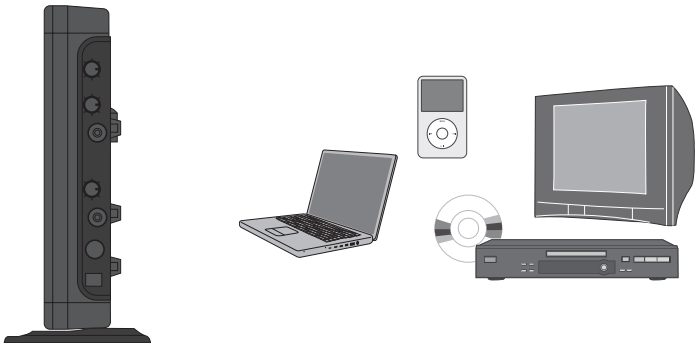
2. AUDIO INTEGRATION CONT'D

1. Turn the Audio Input volume on the REDCAT all the way down.
2. Connect a patch cable (not included) from the audio source into the Audio IN jack on the side of the REDCAT.
3. With both the REDCAT and audio source power on, adjust the volume control until the desired level is achieved.

NOTE! Be careful not to set the volume too high, as this can distort the speaker and potentially cause damage.

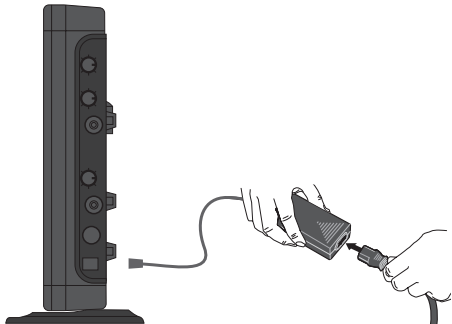


2. AUDIO INTEGRATION CONT'D



3. CONNECTING THE POWER SUPPLY

1. Locate the power supply and AC power cord. Connect the AC power cord into the DC power supply. Make sure the AC Power cord is inserted all the way into the power supply.
2. Insert the DC connector into the "DC POWER INPUT" jack on the side of the REDCAT and plug the other end into an electrical outlet.



4. CHARGING THE REDMIKE

Before use, the REDMIKE should be charged. It will take 8-9 hours for the REDMIKE to obtain a full charge. A fully charged REDMIKE will last for over 7 hours of use. If microphones are used daily, they should be kept in the cradle.

A red light on the charging cradle indicates the REDMIKE is charging. A green light indicates that charging is complete and a full charge has been reached. A blinking light indicates a charging or sensing error. See Troubleshooting section for more information.

REDMIKE incorporates alkaline protection into the microphone design. Always use a Lightspeed rechargeable sensing battery. Replacement AA

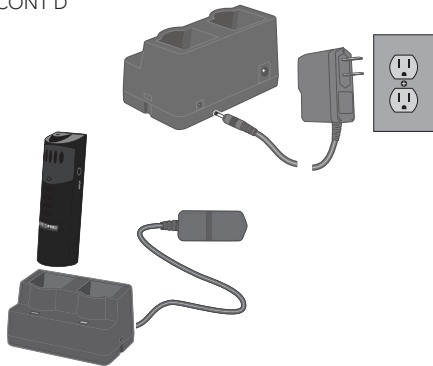
NiMH batteries may only be purchased through Lightspeed Technologies (part # NH2A27).

4. CHARGING THE REDMIKE CONT'D

1. Plug power cord into the cradle charger and then plug the AC end into an electrical outlet.

NOTE: The power supply for countries outside the USA and Canada has interchangeable power plug adapters. Select the correct adapter for your country.

2. Ensure that the REDMIKE is turned OFF.
3. Place the REDMIKE into the cradle. The LED on the cradle will glow RED indicating charging has started. When the REDMIKE is fully charged the LED on the cradle charger will change to GREEN.



5. OPERATING THE REDMIKE

Once the REDMIKE is charged, follow these steps to set it up for use.

1. Push the REDCAT power switch to the ON position.
2. Remove the REDMIKE from the charging cradle and turn it on. The red IR LED (CH. A or CH. B) on the REDCAT will light to indicate a signal is being received.
3. Slip the REDMIKE with lanyard around the neck and position the top of the microphone just below the collarbone. The REDMIKE should be centered on the plastic insert in the lanyard.
4. Slowly increase the CH. A/B volume up to the "silver" section of the dial. This designates normal volume range in the classroom.

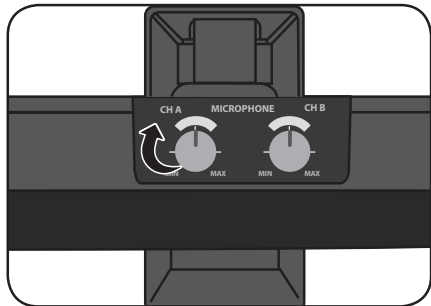
5. While speaking in a normal voice, fine-tune the volume up or down. Proper volume level should be as follows:

- Your voice should be clearly heard by another person on the other side of the room.
- You should barely be able to hear your own voice.
- There should not be any audio "feedback" or squealing outside of 2-3 feet (if there is, turn the volume down slightly).

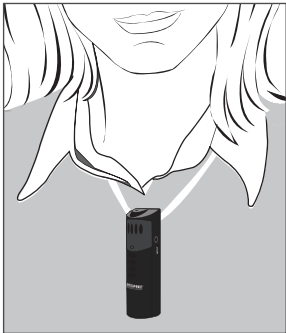
REMEMBER: This equipment supplements the user's voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.

5. OPERATING THE REDMIKE CONT'D

6. Once initial volume level is set, walk around the room and listen for audio dropout and overall audio quality.
7. If a second REDMIKE was purchased, repeat steps 2-5.



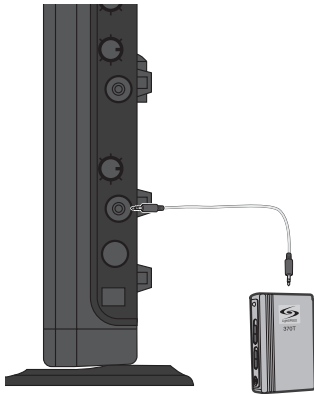
5. OPERATING THE REDMIKE CONT'D



OUTPUT TO ASSISTIVE LISTENING DEVICE (ALD)

1. Turn the Audio (ALD) Out volume control on the REDCAT side panel all way the down.
2. Determine the size and type of audio input jack on the device as many manufacturers' products differ in connector size and shape. The Lightspeed LES-370 Personal FM System requires a 3.5mm to 3.5mm patch cable (part# MSC3535, not included).
3. Connect a patch cable from the ALD's microphone jack or AUX input to the 3.5mm audio jack labeled "AUDIO OUT" on the side of the REDCAT.
4. Adjust the volume control on the ALD's receiver to maximum output. NOTE: This is to set the maximum allowable signal from the REDCAT.
5. With the REDCAT and ALD turned on, speak into the REDMIKE and slowly adjust the AUDIO OUT volume control until the appropriate audio level is attained in the ALD's receiver headphones.

OUTPUT TO ALD CONT'D



USING REDMIKE AS WIRELESS AUDIO LINK

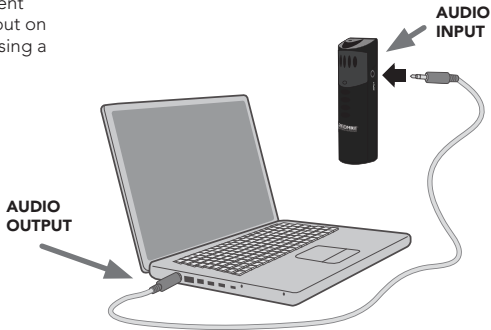
The REDMIKE includes a 3.5mm audio input jack to connect to an audio source like a laptop or MP3 player. The REDMIKE will transmit the audio signal to be played through the system.

If your system includes two REDMIKEs, we recommend using Channel B (student mike) to amplify the external audio equipment so the teacher's volume on the Channel A (teacher mike) does not have to be adjusted.

To determine which REDMIKE is set to Channel B, you can look at the switch on the back of the mic or speak into one of the microphones.

USING REDMIKE AS WIRELESS AUDIO LINK CONT'D

1. Plug your external audio equipment (for example, laptop), into the input on the REDMIKE labeled "INPUT" using a 3.5mm patch cable.



USING REDMIKE AS WIRELESS AUDIO LINK CONT'D

2. Adjust the volume of the selected mic channel to achieve desired loudness.



SECTION 3:

OPTIONAL ACCESSORIES

OPTIONAL REDMIKE VC (VOLUME CONTROL)
CONTROLS AND CONNECTIONS

OPTIONAL REDMIKE VC CONTROLS CONT'D

1. **POWER/MUTE BUTTON**

2. POWER/LOW BATTERY INDICATOR: A BLUE light indicates the REDMIKE VC is on and fully charged. A RED light indicates a charge is needed.

3. Battery Compartment: To open, slide the door downward. The battery should only be replaced by a Lightspeed AA rechargeable sensing battery (part # NH2A27).

4. YELLOW PROTECTIVE TAB: Slide the battery compartment door and remove this disposable protective tab before use.

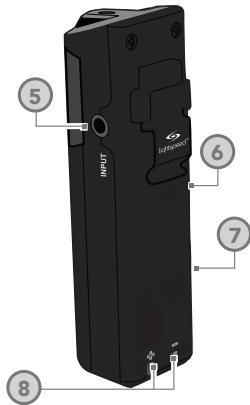
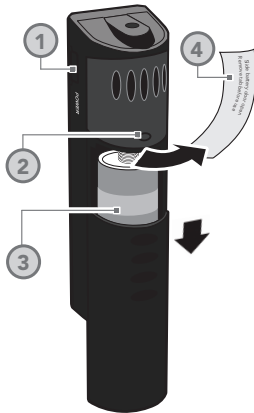
5. AUDIO/MICROPHONE INPUT: Use this input to plug in a laptop, MP3 player or other audio source to wirelessly transmit audio to be played through the system. Alternatively, an external microphone can be connected.

6. CHANNEL SELECT SWITCH (CH A/B): Use this to choose Channel A or B. If you are using a single microphone, we recommend using Channel A.

7. Volume controls (up - down)

8. Charger Contacts (+ -): These contacts interface with the charging tabs when the REDMIKE VC is placed in the BC-RMCC cradle charger.

OPTIONAL REDMIKE VC CONTROLS CONT'D



REDMIKE VC : CHARGING

Before use, the REDMIKE VC should be charged. See page 38 and follow the same instructions for the REDMIKE.

REDMIKE VC : INITIAL SET-UP

See page 36 and follow the same instructions for the REDMIKE to setup the REDMIKE VC.

NOTE: A nominal volume level must be set on the REDCAT before adjusting controls on the REDMIKE VC.

The teacher can now use the controls on the REDMIKE VC to adjust the volume level from anywhere in the room. The microphone volume control has 4 steps up and 4 steps down from the mid point (9 levels total).

REDMIKE SHARE: CONTROLS AND CONNECTIONS

1. POWER SWITCH

2. POWER/CHARGE INDICATOR: this light glows blue when turned on and turns off to indicate low battery level. When charging, the **light glows red.**

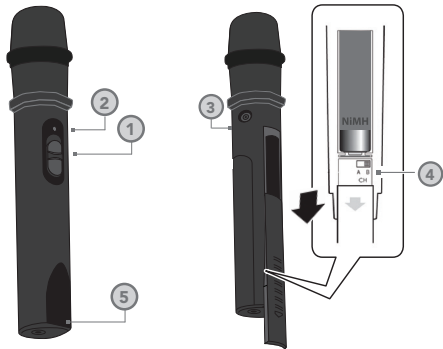
3. AUDIO INPUT: plug a laptop, MP3 player or other audio device into this jack to wirelessly transmit the audio signal to be played through the system.

4. CHANNEL SELECT SWITCH (CH A/B):

Located in the battery compartment, this switch is set to Channel B at the factory.

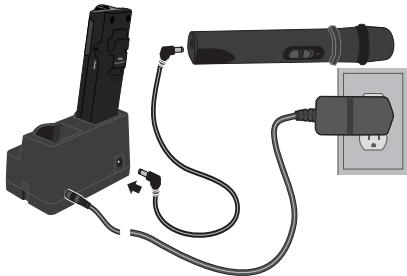
5. CHARGER INPUT: Plug the charging cable from the REDMIKE cradle charger into this jack.

REDMIKE SHARE: CONTROLS AND CONNECTIONS CONT'D



REDMIKE SHARE: CHARGING

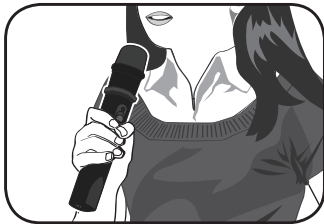
1. Ensure the REDMIKE share is turned OFF.
2. Make sure the cradle charger is plugged into a wall outlet. Connect one end of the charging cable into the jack labeled CHARGER on the bottom of the REDMIKE Share. Plug the other end into the charging jack on the rear of the cradle charger.
3. The LED on the microphone will glow RED to indicate charging.
4. Leave the REDMIKE Share plugged in overnight (8-10 hours) to obtain a full charge.



REDMIKE SHARE: INITIAL SET-UP

1. Ensure the REDCAT is ON. The blue LED on the front panel will glow.
2. Turn on the REDMIKE Share by sliding the switch to the top position.
3. Grip the barrel in the center section. Avoid covering the infrared emitters just below the microphone grille. This could interrupt signal transmission.
4. While speaking in a normal voice, increase the CH. B VOLUME on the REDCAT level until your voice is barely audible.

REMEMBER: This equipment is designed to supplement and distribute the user's voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.



INITIAL SET-UP: OPTIONAL IRLC MEDIA CONNECTOR

1. Turn off the second microphone. The iR Media Connector uses the same channel (channel B) as the optional second microphone (REDMIKE or REDMIKE Share). As a result, they cannot be used simultaneously. If you have a second microphone, turn it off before transmitting audio from the iRLC.

NOTE: If you adjust the CH B volume on the classroom audio system, you will also be changing the volume for your second microphone. Return the CH B volume knob to the original position before turning the second microphone back on.

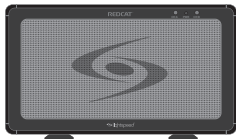
2. The iR Media Connector volume is preset for most standard audio signals. If you need to turn the volume up or down, follow this procedure:
 - A. Adjust the volume at the computer, television, or other audio source if possible.



INITIAL SETUP:

OPTIONAL IRMC MEDIA CONNECTOR CONT'D

- B. If the audio source does not have a volume control (such as many DVD players) adjust the volume at the iRMC.
- 3. If the first two options do not give optimum volume level, the last place to adjust the volume is the CH. B Volume on the REDCAT.

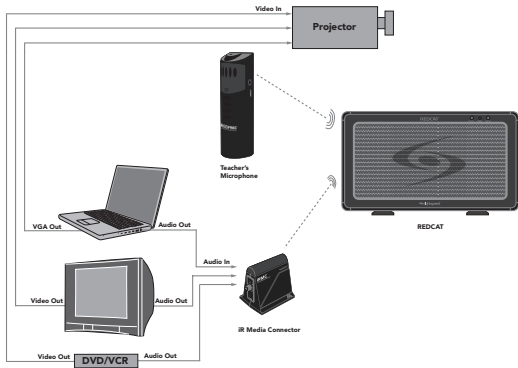


OPTIONAL IRLC MEDIA CONNECTOR AUDIO INTEGRATION

The iRLC is designed to integrate with the REDCAT and multiple audio sources, allowing other instructional technologies to be clearly heard throughout the classroom.

OPTIONAL IRMC AUDIO INTEGRATION

CONT'D



OPTIONAL ACCESSORIES

Other Optional Accessories

RMS2	REDMIKE Share microphone with rechargeable battery pack and charging cable
LT71	LightMic with rechargeable batteries and charging cable
MC-TK250LTM	Noise-canceling headset microphone
AC-TCC7	Charging cable for LT71 and REDMIKE Share microphones
MSC3535	3.5mm to 3.5mm stereo audio cable
NH1	AA Rechargeable battery (for LT71 and REDMIKE Share)

SECTION 4:

TROUBLESHOOTING

COMMON PROBLEMS AND SOLUTIONS

Note: Most problems are directly related to low battery power. Please run through the “Battery Check” items first. For remaining troubleshooting, use known good, fully-charged batteries.

COMMON PROBLEMS AND SOLUTIONS CONT'D

ALL PROBLEMS: Most Problems are related to low battery power.

SOLUTION: Battery Check

- Confirm batteries are charged each night.
- Confirm proper batteries are used. The REDMIKE requires the Lightspeed NH2A27 rechargeable sensing battery for proper charging. The REDMIKE Share requires NH2PAK AA rechargeable battery pack.
- Make sure the microphones are turned off while charging so a full charge is attained. Full charge will last over 7 hours.

- Inspect the battery contacts. Clean and adjust if necessary.

PROBLEM: Hearing Static

SOLUTION: Follow these steps to eliminate static.

- Ensure REDCAT is in optimum location. The REDCAT will cover a 1200 sq. ft. enclosed classroom.
- Ensure that no other REDMIKE/REDMIKE Share is operating on the same channel.
- If the optional IRMC media connector is in use, set the microphone to Channel A.

COMMON PROBLEMS AND SOLUTIONS CONT'D

PROBLEM: Low Volume or Feedback

SOLUTION: Follow these steps to eliminate low volume or feedback.

- Ensure microphone is positioned appropriately, just below the collar bone.
- Check volume level on the amplifier. If the volume is too high, feedback will occur. Adjust accordingly.
- Adjust the volume level on the back of the optional REDMIKE VC.

PROBLEM: No Sound From Speaker

SOLUTION: Follow these steps to produce sound from speakers.

- Turn the REDCAT on. Confirm that the POWER light located on the front panel is on.
- Confirm signal is being received at the REDCAT. The IR signal light will be RED indicating a signal is being received.
- Confirm that REDMIKE is turned on. There will be a BLUE LED on the microphone to indicate it is powered on.

If you review these instructions and still have questions, write down the serial number and model number of your system and call Lightspeed Technical Services at 800.732.8999, 5 a.m. – 5 p.m., PST.

TIPS TO OBTAIN OPTIMUM AUDIO PERFORMANCE

- Speak in a natural voice. A normal conversational speech level will provide an adequate signal. It is not necessary to increase the intensity of your voice—the audio system provides adequate amplification (approximately 5 – 10 dB) above ambient room noises.
- Avoid wearing jewelry that may rub or bump against the microphone.
- Turn the REDMIKE off during private conversations with a student, parent, or other classroom visitor. You can also cover the LED lens on top of the REDMIKE to block the signal.
- Recharge batteries each night. When recharged nightly, operating time (actual usage) for the transmitters will last through a typical school day.

SECTION 5:

WARRANTY, SAFETY & SPECIFICATIONS

FIVE-YEAR LIMITED WARRANTY

Lightspeed Infrared Audio Systems and optional accessories are warranted against malfunction due to defect in materials and workmanship for a period of five (5) years from date of purchase. System components will be repaired or replaced at Lightspeed's option. Rechargeable batteries and connecting cables are guaranteed for one (1) year. Warranty does not extend to finish, appearance, or malfunctions due to abuse or misuse. Repairs performed by other than Lightspeed Technologies will void this warranty.

For warranty service, including return shipping labels, please contact Lightspeed's Service Department at 800.732.8999 / service@lightspeed-tek.com.

1. Warranty on infrared microphones is FIVE (5) YEARS.
2. Warranty on Lightspeed rechargeable batteries, all external cables and wires provided by Lightspeed is one (1) year.

FIVE-YEAR LIMITED WARRANTY CONT'D

3. Prepaid shipping labels are provided by Lightspeed factory or an authorized warranty service center for warranty repairs.
4. Warranty does not extend to finish, appearance items, or malfunctions due to abuse or operation other than specified conditions, nor does it extend to incidental or consequential damages. Repair by other than Lightspeed or its authorized service agencies will void this guarantee. Information on authorized service agencies is available from Lightspeed Technologies, Inc.

Our Service Department (800.732.8999, 5 a.m. – 5 p.m., PST) will handle all your repair/replacement needs.

SAFETY WARNINGS AND CERTIFICATIONS



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**



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY WARNINGS AND CERTIFICATIONS CONT'D



This product is listed to UL standards and requirements for electrical safety by Underwriters Laboratories Inc.



This product conforms with the essential requirements of the following European Union Directives: 89/336/EEC, 92/31/EEC, 93/68/EED, and 2004/108/EC Electromagnetic Compatibility Directives.



Lightspeed Technologies launched a formal product recycle program in Europe that complies with the European Union Directive 2002/96/EC on Waste Electrical and Electronic Equipment ("WEEE Directive"). Please visit our website at www.Lightspeed-tek.com for more information.



This product is manufactured using lead-free processes and is free of other materials harmful to the environment. It conforms to the most stringent new European guidelines for consumer products (RoHS).



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment has been tested and found to comply with the limits of a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

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

Caution: To maintain the compliance with the FCC's RF exposure guideline, place Media Connector & TOPCAT at least 20 cm from nearby persons.



Ce dispositif est conforme à l'article 15 de la réglementation FCC. Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas causer d'interférence nuisible et (2) ce dispositif doit accepter toute interférence reçue, notamment les interférences pouvant occasionner un fonctionnement non souhaité.

Tout changement ou modification n'ayant pas fait l'objet d'une autorisation expresse émanant de la partie responsable de la conformité pourraient entraîner la perte du droit d'usage de l'équipement par l'utilisateur.

Cet équipement a été testé et certifié conforme aux restrictions pour les appareils numériques de Classe B, conformément à l'article 15 de la réglementation FCC. Ces restrictions visent à assurer une protection raisonnable contre les interférences nuisibles dans les installations résidentielles.

Cet équipement produit, utilise et peut émettre de l'énergie de fréquence radio et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer des interférences nuisibles aux communications radio. Toutefois, rien ne garantit l'absence d'interférences dans une installation particulière.

Toutefois, rien ne garantit l'absence d'interférences dans une installation particulière. Si cet équipement provoque des interférences avec la réception radio ou télévision - ce qui peut être déterminé en éteignant et en rallumant l'équipement - il est recommandé à l'utilisateur d'essayer de corriger les interférences par l'un des moyens suivants :

- En réorientant ou en réinstallant l'antenne de réception
- En augmentant la distance entre l'équipement et le récepteur
- En branchant l'équipement à un circuit autre que celui où le récepteur est branché
- En contactant le revendeur ou un technicien expérimenté en radio/télévision

Attention : afin d'assurer la conformité aux exigences de la FCC en matière d'exposition aux RF, placez le Media Connector et le TOPCAT à une distance de 20 cm minimum des personnes les plus proches.

SYSTEM SPECIFICATIONS

OVERALL SPECIFICATIONS

Power Output	20 Watts
Amplifier Frequency Response	120 Hz – 13 kHz
Signal-to-Noise Ratio	>77 dB
Dynamic Range	> 73 dB
Overall Dimensions (W x D x H)	16" x 9.5" x 1.75" (406.4 mm x 241.3 mm x 44.5 mm)
Weight	3.23 lbs. (1.5 kg)

SYSTEM SPECIFICATIONS CONT'D

RECEIVER SPECIFICATIONS

Carrier Frequencies (IR)	2.06 / 2.54 MHz
IR Operating Range	up to 1200 square feet
Receiver Type	Superheterodyne
Receiver Sensitivity	6 μ V for 60 dB S/N
Image and Spurious Rejection	> 70 dB
Alternate Carrier Frequencies (iR)	3.20/3.70 MHz

SYSTEM SPECIFICATIONS CONT'D

TRANSMITTER SPECIFICATIONS

REDMIKE and REDMIKE VC

Audio Distortion	< 1 %
Built-in Microphone	Unidirectional Electret
Battery Power (1-year warranty)	1 AA NiMH Rechargeable Sensing Battery
Audio Input	3.5 mm
Dimensions (W x D x H)	0.9" x 1.0" x 3.5" (22.9 mm x 25.4 mm x 88.9 mm)
Weight	2.1 oz. (59.5 g)

SYSTEM SPECIFICATIONS CONT'D

TRANSMITTER SPECIFICATIONS

REDMIKE Share Handheld Microphone

Audio Distortion	< 1 %
Built-in Microphone	Unidirectional Electret
Battery Power (1-year warranty)	2 AA NiMH Rechargeable
Dimensions (W x D x H)	2.25" x 2.25" x 8.75" (57.2 mm x 57.2 mm x 222.3 mm)
Weight	7.36 oz. (208.7 g)



AC-MNRC2



LIGHTSPEED TECHNOLOGIES

11509 SW HERMAN ROAD / TUALATIN, OR 97062

TOLL FREE: 800.732.8999 / PHONE: 503.684.5538 / FAX: 503.684.3197

LIGHTSPEED-TEK.COM

MN0435US01-0