

Classroom Audio System



User Manual

TABLE OF CONTENTS

SECTION 1: Overview	5	System Components and Unpacking
	6	Optional Components
	7	Front Panel Indicators
	7	Top Panel Controls
	8	Side Panel Controls and Connections
	8	Rear Panel Controls and Connections
	9	Redmike Controls and Connections
	10	Cradle Charger Controls and Connections
SECTION 2: Set-up & Use	11	Step 1. Determine Set-up Location
	11	1A. To Set-Up on Table Top
	12	1B. To Set-Up Mounted on a Wall
	13	1C. Wall Mounting Locations
	14	Step 2. Connecting the Power Supply
	15	Step 3. Audio Integration
	16	Step 4. Charging the Redmike
	17	Operating the Redmike
	18	Output to Assistive Listening Device (ALD)
	19	Using Redmike as Wireless Audio Link
SECTION 3: Optional Accessories	20	Optional Redmike VC Controls and Connections
	21	Redmike VC: Charging
	21	Redmike VC: Initial Set-up
	22	Redmike Share: Controls and Connections
	23	Redmike Redmike Share: Charging
	24	Redmike Share: Initial Set-up
	25	Initial Set-up: Optional iRMC Media Connector
	26	Optional iRMC Media Connector Audio Integration
	26	Optional Accessories
SECTION 4: Troubleshooting	27	Common Problems and Solutions
	28	Tips to Obtain Optimum Audio Performance
SECTION 5: Warranty, Safety & Specifications	29	Five-Year Limited Warranty
	30	Safety Warnings and Certifications
	34	System Specifications

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.
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.
17. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
18. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
19. **Warning** - battery pack shall not be exposed to excessive heat such as sunshine, fire or the like.



SECTION 1:

OVERVIEW

SYSTEM COMPONENTS AND UNPACKING

The standard configuration of the Redcat® will contain:

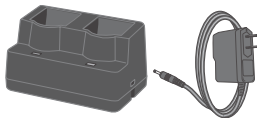
Redcat® Infrared
Receiver/Amplifier
and Power Supply



Redmike®
Classroom
Microphone



Cradle Charger
and Power Supply



5. Warranty, Safety
& Specifications

4. Troubleshooting

3. Optional
Accessories

2. Setup & Use

1. Overview

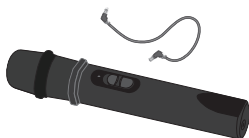
OPTIONAL COMPONENTS

Optional equipment which may be part of your Redcat system:

Redmike® VC
Volume Control
Microphone



Redmike® Share
Handheld Mic &
Charging Cable



STANDARD COMPONENTS

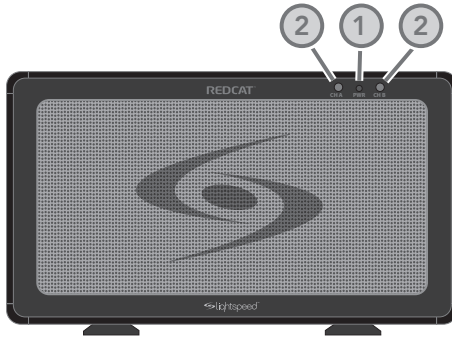
RC2	Redcat all-in-one receiver/amplifier/speaker with power supply
24V-1.75-NA	Power supply for Redcat
24V-1.75-__	Power supply for Redcat, specify country
RMT2	Redmike classroom microphone with rechargeable battery and lavalier cord
NH2A27	Lightspeed AA rechargeable sensing battery (for Redmike)
RMLC3	Lavalier cord for Redmike
RMCC	Redmike cradle charger
5V-1.0-NA	Cradle charger power supply
5V-1.0-INT	Cradle charger power supply, universal plug attachment

OPTIONAL COMPONENTS

RMV2	Redmike VC microphone with battery
RMS2	Redmike Share handheld microphone with battery pack
NH2APK	NiMH rechargeable battery pack for Redmike Share
IRMC2	Infrared media connector with cables and power supply
WMKRC2	Redcat wall mounting kit includes screws, wall anchors, security clip and extra RC feet

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.



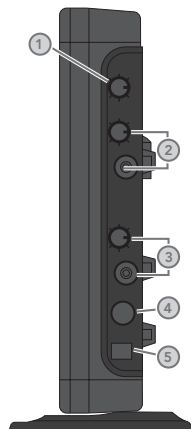
TOP PANEL CONTROLS

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.



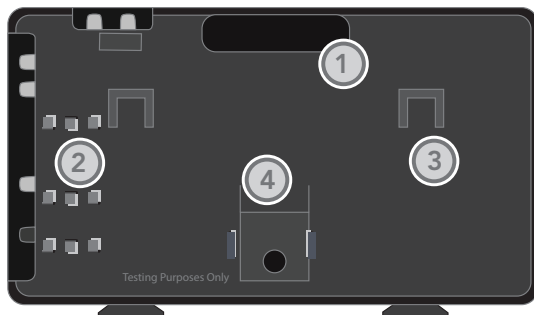
SIDE PANEL CONTROLS / CONNECTIONS

- 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.

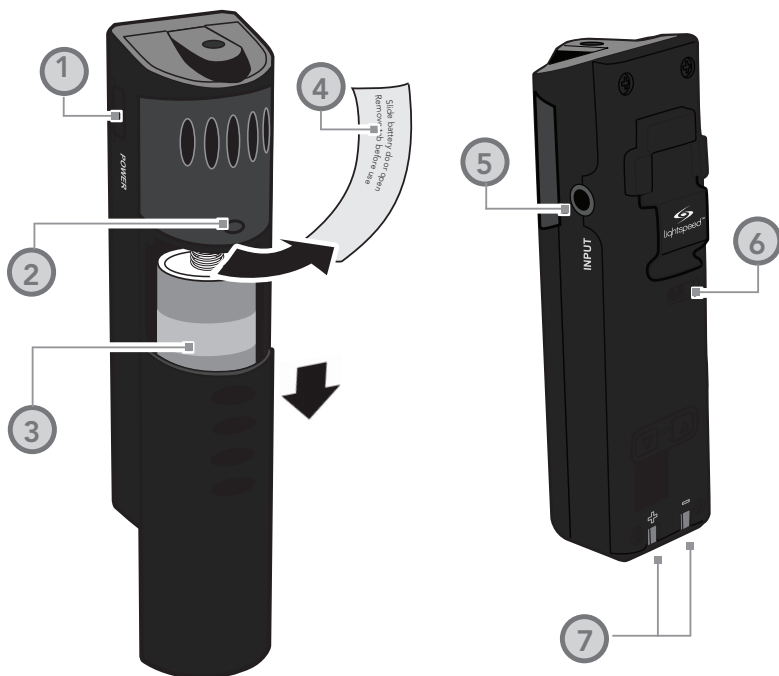


REAR PANEL FEATURES

- 1. CARRYING INSET:** Cutaway grip for moving or carrying the Redcat Access.
- 2. CABLE MANAGEMENT AND STRAIN RELIEF**
- 3. WALL MOUNTING SLOTS**
- 4. SECURITY BRACKET SLOT**



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.

- 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 RMCC cradle charger for daily charging. Simply place the Redmike in the charger.

5. Warranty, Safety
& Specifications

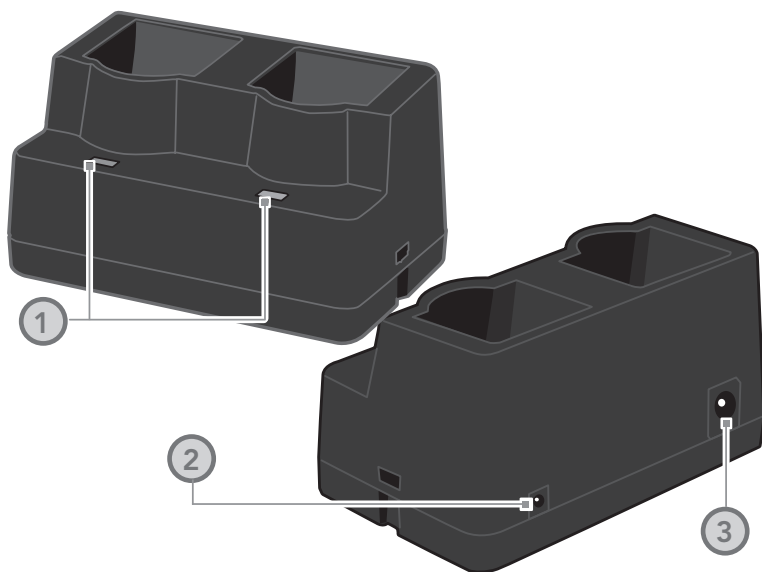
4. Troubleshooting

3. Optional
Accessories

2. Setup & Use

1. Overview

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 10, item 4.) A blinking green LED means a non- Lightspeed battery has been installed (possibly an alkaline battery).

2. DC POWER PORT: Connect the 5V/1.0A DC power cord here.

3. OPTIONAL CHARGING PORT: Plug the charging cord for the optional Redmike Share microphone here.

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 wall mount brackets.

Advantages of either include:

Tabletop (recommended):

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

Wall-mount:

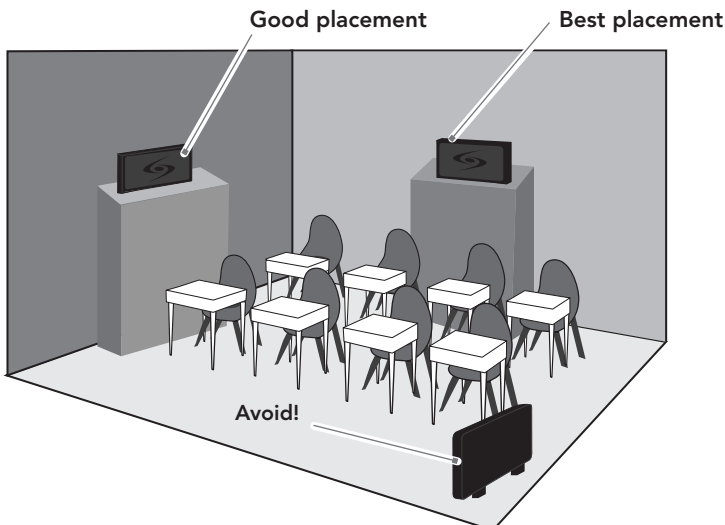
- More permanent setup
- Greater security

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 s in close proximity to the teacher's mic can result in feedback.

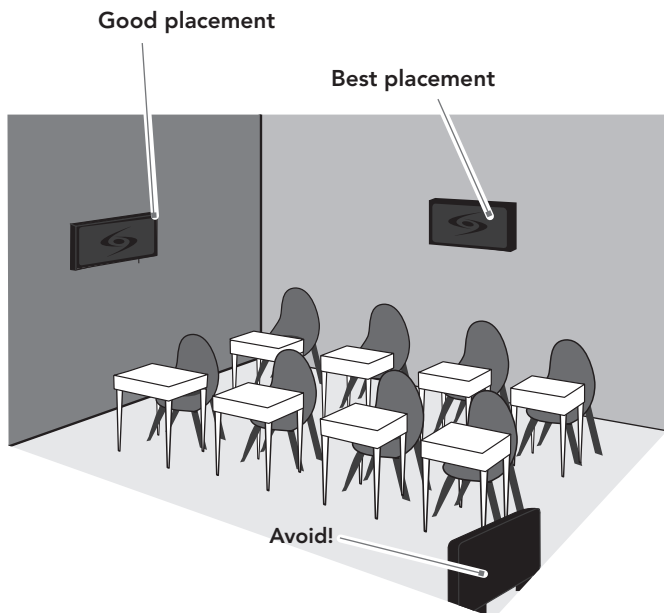


1B. TO SET-UP MOUNTED ON A WALL

First, consider that the Redcat should be placed within 7 feet of an electrical outlet and about 6-8 feet off the ground.

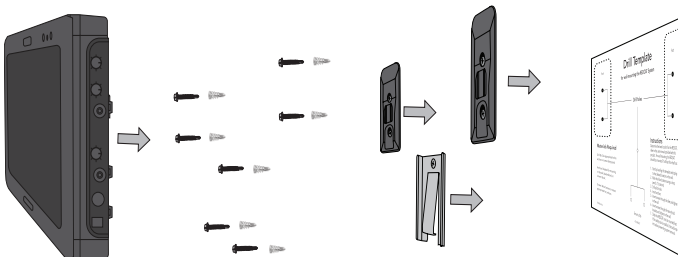
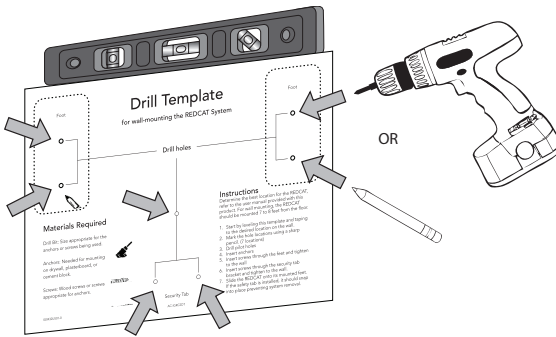
Next, find a location as far away as possible from the teacher who will be using the mic. The best place is centered on the long wall opposite

the teacher. If this is not possible, other good locations are on the wall next to 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. TO SET-UP MOUNTED ON A WALL CONT'D

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



5. Warranty, Safety
& Specifications

4. Troubleshooting

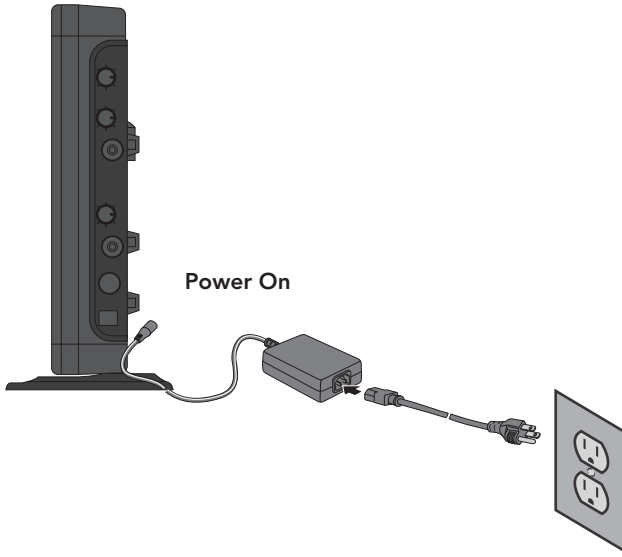
3. Optional
Accessories

2. Setup & Use

1. Overview

2. CONNECTING THE POWER SUPPLY

1. Locate the power supply and AC power cord. Connect the AC power cord into the DC power supply.



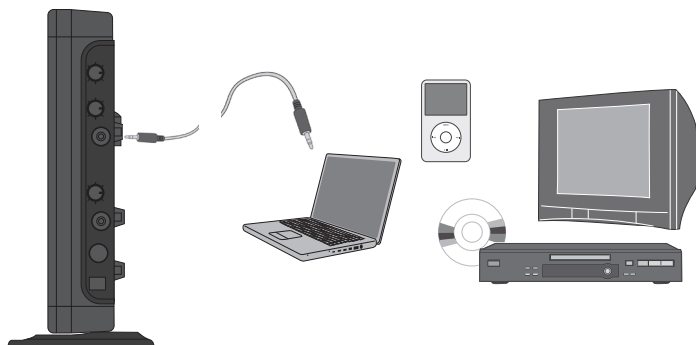
2. Insert the DC connector into the "DC INPUT" connector on the Redcat and plug the other end to an electrical outlet.
3. Power on the Redcat by pressing the power button.

3. 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.

Audio Input

The Redcat has one AUDIO INPUT with volume control for connecting to classroom audio sources. Use a patch cable (not included) to connect a computer, iPod, iPad, or other audio source.



5. Warranty, Safety
& Specifications

4. Troubleshooting

3. Optional
Accessories

2. Setup & Use

1. Overview

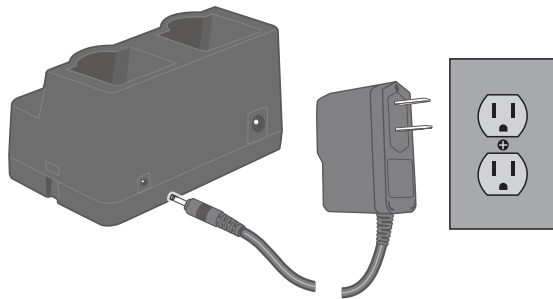
4. CHARGING THE REDMIKE

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 – microphones can be left in a charging cradle constantly for up to 2 weeks without causing degradation to battery life.

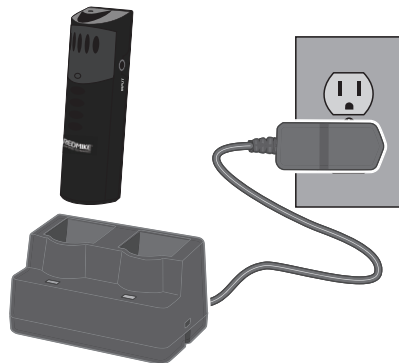
A red light on the charging cradle indicates the Redmike is charging. A green light indicates that charging is complete and a full charge has been reached. A blinking light indicates a charging or sensing error. See Troubleshooting section for more information.

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). Do not attempt to charge alkaline batteries. They can overheat and expand creating a significant hazard and damaging the microphone (this is not covered by warranty).

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



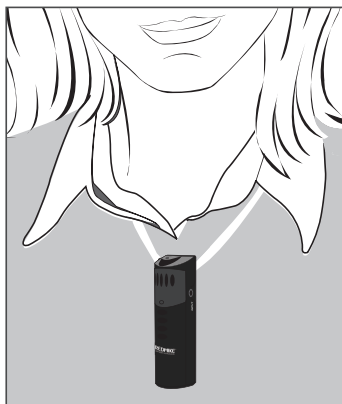
2. Place the Redmike into the cradle. The LED on the cradle will glow red indicating charging has started. When the Redmike is fully charged the LED on the cradle charger will change to green.



5. OPERATING THE REDMIKE

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

1. Turn the Redcat power on. The blue LED will glow.
2. Remove the Redmike from the charging cradle and turn it on.
3. Slip the Redmike with lanyard around the neck. The top of the microphone will be approximately just below the collarbone.
4. Slowly increase the channel A/B volume up to the 'green' 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:
 - a. Your voice should be clearly heard by another person on the other side of the room.
 - b. You should barely be able to hear your own voice.
 - c. There should not be any audio "feedback" or squealing outside of 2-3 feet (if there is, turn the volume down slightly).

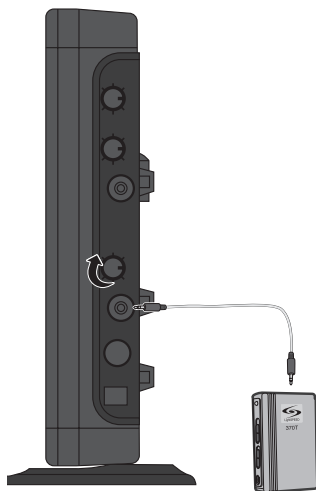


REMEMBER: This equipment supplements the user's voice so they are able to speak in a conversational tone. Having the volume set too high will result in feedback and listener fatigue.

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 2-4.

6. OUTPUT TO ASSISTIVE LISTENING DEVICE (ALD)

1. Turn the ALD (Assistive Listening Device) volume control on the Redcat side panel counterclockwise all the 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 370 Transmitter 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 "ALD OUT" on the side of the Redcat.
4. With the Redcat and ALD turned on, speak into the Redcat and slowly adjust the ALD volume control until the appropriate audio level is attained in the ALD's receiver headphones.
5. It may be necessary to adjust the volume on the Personal FM receiver to achieve appropriate volume level.



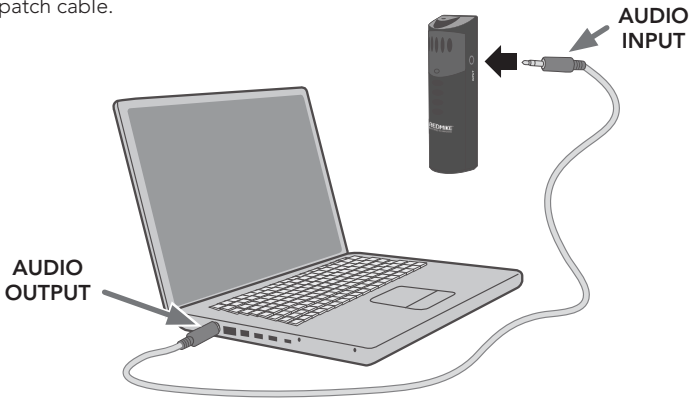
USING REDMIKE TO AMPLIFY EXTERNAL AUDIO EQUIPMENT

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 mike or speak into one of the mics and watch which set of LED's glow on the front panel of the Redcat (A Volume or B Volume correspond to Channels A or B).

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

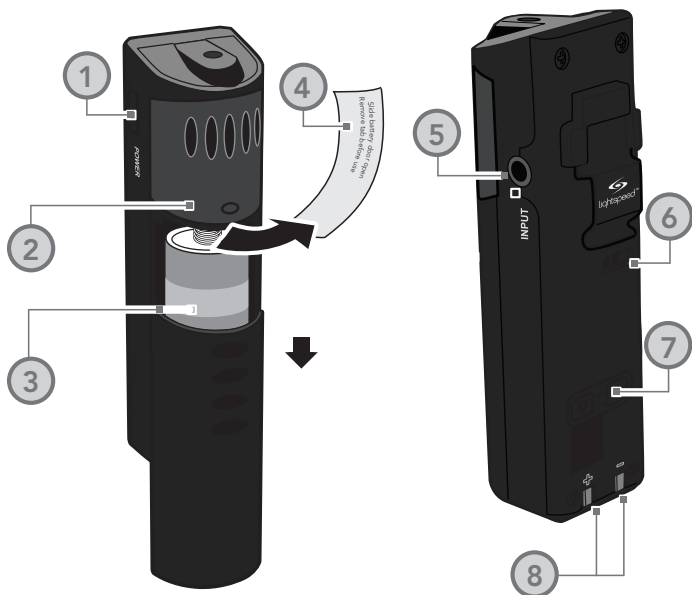


2. Adjust the volume of the selected mic channel to achieve desired loudness.



SECTION 3:

OPTIONAL ACCESSORIES

OPTIONAL Redmike VC (Volume Control)
Controls and Connections**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 RMCC cradle charger.

REDMIKE VC : Charging

Before use, the Redmike VC should be charged. See page 18 and follow the same instructions for the Redmike.

REDMIKE VC : Initial Set-up

See page 19 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).

5. Warranty, Safety
& Specifications

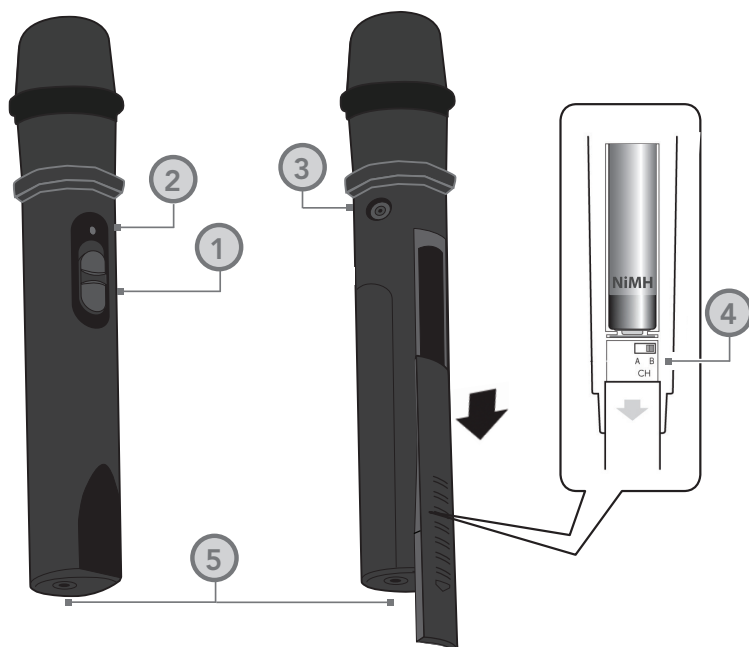
4. Troubleshooting

3. Optional
Accessories

2. Setup & Use

1. Overview

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 or into this jack.

REDMIKE SHARE: Charging

1. Ensure that 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.
3. Plug the other end into the charging jack on the rear of the cradle charger.
4. The LED on the microphone will glow red to indicate charging.
5. Leave the Redmike Share plugged in overnight (8-10 hours) to obtain a full charge. A blinking red LED indicates that charging is complete.



5. Warranty, Safety
& Specifications

4. Troubleshooting

3. Optional
Accessories

2. Setup & Use

1. Overview

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 channel B volume on the Redcat 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 IR 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 iRMC.

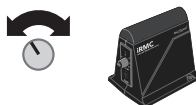
NOTE: If you adjust the CH B volume on the classroom audio system, you will also be changing the volume for your second microphone. Return the CH B volume knob to the original position before turning the second microphone back on.

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:

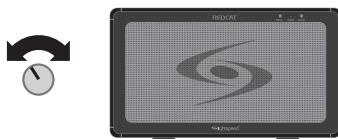
A. Adjust the volume at the computer, television, or other audio source if possible.



B. If the audio source does not have a volume control (such as many DVD players) adjust the volume at the iRMC.

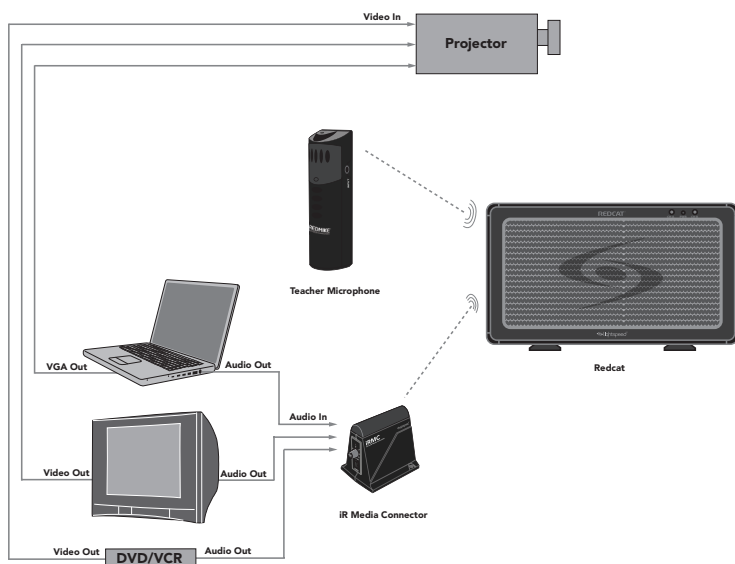


C. If the first two options do not give optimum volume level, the last place to adjust the volume is the CH. B volume on the Redcat.



OPTIONAL IR MEDIA CONNECTOR AUDIO INTEGRATION

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



OTHER OPTIONAL ACCESSORIES

IRMC2	Infrared Media Connector
TK250M	Noise-canceling headset microphone
TCC7	Charging cable for Redmike Share
NH2APK	AA NiMH rechargeable battery pack for Redmike Share, one per microphone
MSC3535	3.5mm to 3.5mm stereo audio cable

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.

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 uses the NH2APK rechargeable battery pack.
- Make sure the microphones are turned off while charging so a full charge is attained. Full charge will last eight 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 (refer to Redcat placement in manual). A 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 iR media connection is in use, set the microphone to Channel A.

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.
- Turn up the volume on the Redcat if volume seems too low. If feedback occurs, try turning down the volume on the Redcat.

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 audio 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. Customers outside the U.S. should contact their local reseller.

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 Classroom Audio Systems are guaranteed against malfunction due to defects in materials and workmanship for a period of FIVE (5) YEARS, beginning at the date of the purchase invoice. If such malfunction occurs, the product will be repaired or replaced (at Lightspeed's option) without charge during the warranty period.

Lightspeed's Warranty Exchange Program applies to all infrared systems within the five (5) year warranty period. If an infrared product or component has an issue that requires service, a refurbished replacement will immediately be sent to the customer to minimize downtime. Customers will receive the exchange product(s) or component(s) within 2-3 days. A prepaid return label will be included with exchanged products so original malfunctioned equipment can be returned to Lightspeed. Any exchanged equipment will remain covered under the original five (5) year warranty.

1. Warranty on infrared microphones is FIVE (5) YEARS.
2. Warranty on Lightspeed NiMH rechargeable batteries is one (1) year.
3. Prepaid shipping label provided by Lightspeed for warranty repairs within the U.S.
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 warranty. 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. Customers outside the U.S. should contact their local reseller.

SAFETY WARNINGS AND CERTIFICATIONS



CAUTION

RISK OF ELECTRICAL SHOCK
DO NOT OPEN



THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.



The lightning flash with arrowhead symbol inside an equilateral triangle is intended to alert the user to the presence of non insulated "hazardous voltage" within the product's enclosure, which may be of sufficient magnitude to induce a risk of electric shock to persons.



The exclamation mark inside an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying this product.



**USE A LIGHTSPEED
SUPPLIED BATTERY ONLY**

CERTIFICATIONS



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: 2004/108/EC Electromagnetic Compatibility (EMC) and 2006/95/EC Low Voltage Directive (LVD).



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).

PRÉCAUTIONS DE SÉCURITÉ ET CERTIFICATIONS



ATTENTION
RISQUE D'ÉLECTROCUTION
NE PAS OUVRIR



CONFORMÉMENT AUX NORMES D'INSTALLATION APPLICABLES, CE PRODUIT DOIT ÊTRE INSTALLÉ PAR UNE PERSONNE FAMILIARISÉE AVEC LA CONCEPTION ET LE FONCTIONNEMENT DU PRODUIT ET CONSCIENTE DES RISQUE ENCOURUS.



L'éclair flèche dans un triangle équilatéral avertit l'utilisateur de la présence d'une "tension dangereuse" non isolée à l'intérieur de l'appareil, qui peut être d'une ampleur suffisante pour constituer un risque d'électrocution.



Le point d'exclamation contenu dans un triangle équilatéral avertit l'utilisateur de la présence d'importantes instructions d'exploitation et de maintenance dans la documentation qui accompagne ce produit.



UTILISEZ UNIQUEMENT LA BATTERIE LIGHTSPEED FOURNIE

CERTIFICATIONS



Ce produit est certifié conforme aux normes et aux exigences UL en matière de sécurité électrique par Underwriters Laboratories Inc.



Ce produit est conforme aux principales exigences des directives de l'Union Européenne suivantes : 2004/108/EC Electromagnetic Compatibility (EMC) and 2006/95/EC Low Voltage Directive (LVD).



Lightspeed Technologies a lancé un programme de recyclage de produits en Europe conformément à la directive de l'Union Européenne 2002/96/CE relative aux déchets d'équipements électriques et électroniques (directive « DEEE »). Veuillez visiter notre page Web www.Lightspeed-tek.com pour plus de renseignements.



Ce produit est fabriqué en utilisant des processus sans plomb ni aucune autre matière nuisible à l'environnement. Il est conforme aux nouvelles règles européennes les plus strictes en matière de biens de consommation (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. 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



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. 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

EU DECLARATION OF CONFORMITY

ACCORDING TO EC LVD DIRECTIVE 2006/42/EC

Manufacturer: Lightspeed Technologies, Inc.

Address: 11509 SW Herman Rd,
Tualatin, Oregon 97062

We Herewith declare, that the following system complies with the appropriate basic safety and health requirements of the Directive based on its design and type, as brought into circulation by us. In case of alteration of the system, not agreed upon by us, this declaration will lose its validity.

Product: REDCAT SERIES

Model Number(s): REDCAT (RC2)

Conforms to the following EU Directives and the standards stated:

Low Voltage Directive: 73/23/EEC and amendments; UL/IEC 60065

EMC Directives: 89/336/EEC, 92/31/EEC, 93/68/EEC, 2004/108/EC, EN 55022:2006+A1:2007, EN55024:1998+A1:2001 + A2:2003,

EN61000-3 & -4 – Generic Immunity Standard,

CISPR 22, Class B – Radiated and Conducted Emissions from Audio Equipment.

Including: EN 61000-3-2:2000

EN 61000-4-5:2005

EN 61000-3-3:1995+A1:2001+A2:2005

EN 61000-4-6:2006

EN 61000-4-2:2001

EN 61000-4-8:2001

EN 61000-4-3:2006

EN 61000-4-11:2004

EN 61000-4-4:2004

The Technical Construction File is available to proper authorities and the product is CE marked.

LST Representatives:



John Chabot, Compliance Engineer



Dave Jordahl, Chief Engineer

2/9/2012

Date

5. Warranty, Safety
& Specifications

4. Troubleshooting

3. Optional
Accessories

2. Setup & Use

1. Overview

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)

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 (iIR)	3.20/3.70 MHz

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)

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)



A C - M N R C 2 - A

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

MN0435US01-7