

Classroom Audio System



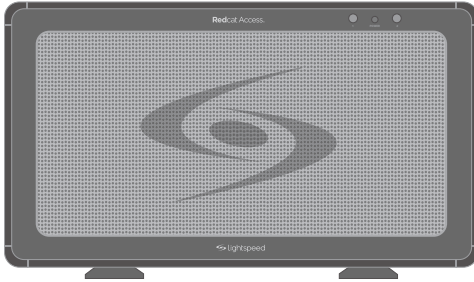
User Manual

SECTION 1:

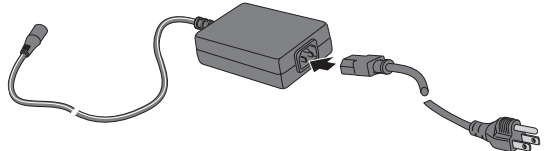
OVERVIEW

SYSTEM COMPONENTS AND UNPACKING

The standard configuration of the Redcat® Access will contain:



Redcat® Access
Receiver/Amplifier
with Table Stand and
Power Supply



Flexmike®
Classroom
Microphone

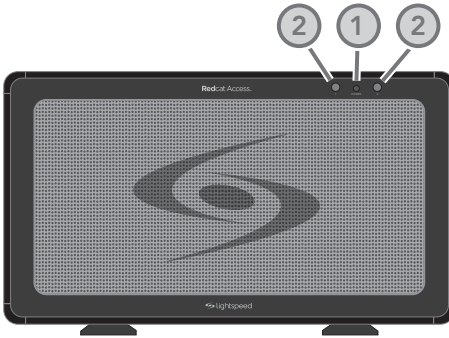


Wall Charger &
Charging Cables



FRONT PANEL INDICATORS

1. **POWER ON INDICATOR:** The power LED will glow blue when power is applied.
2. **MIC 1 & MIC 2:** Mic link and registration indicators
 - a. Flashing amber indicates registration is in process.
 - b. Solid green indicates a link has been established.



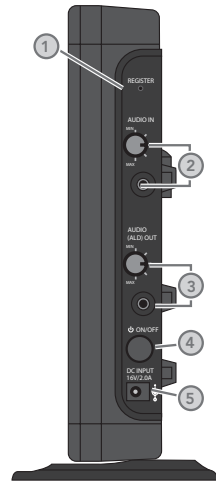
TOP PANEL CONTROLS AND CONNECTIONS

1. **MIC VOLUME:** Controls the volume level of the microphones.
2. **tone CONTROL:** Adjusts the audio level for optimum sound quality.



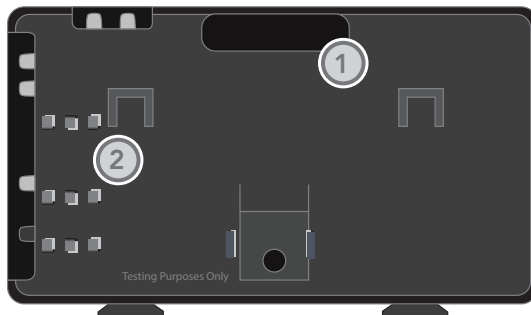
SIDE PANEL CONTROLS AND CONNECTIONS

- 1. REGISTRATION:** Press this button if there is a new microphone to be registered.
- 2. AUDIO INPUT VOLUME CONTROL & INPUT JACK:** 3.5mm stereo connector for connecting classroom audio sources to the Redcat Access (RCA). Controls the volume level of the audio input from the connected audio source..
- 3. AUDIO OUTPUT VOLUME CONTROL & OUTPUT 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 RCA on or off. The front panel blue LED lights when power is on
- 5. DC POWER INPUT JACK:** Plug the power supply (16V/2.0A) into this jack.

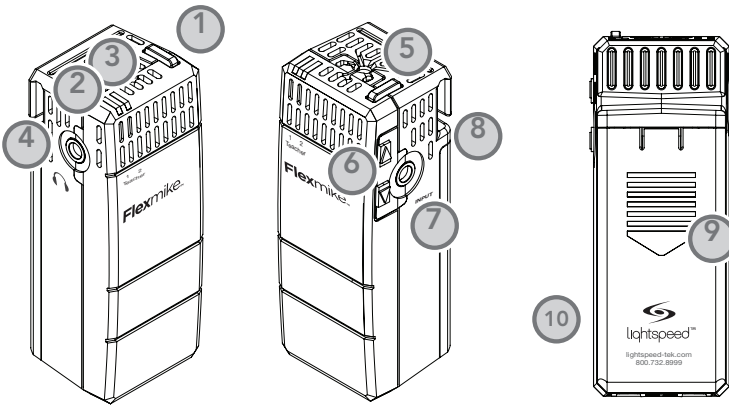


REAR PANEL CONTROLS AND CONNECTIONS

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



FLEXMIKE CONTROLS AND CONNECTIONS



- 1. POWER/MUTE SWITCH:** press and hold to power on, press to mute, press and hold to power off.
- 2. MIC 1 STATUS:** lighted to indicate microphone is registered as MIC 1
 - Blue: solid = normal operation; flashing = linking in process
 - Red: solid = muted; flashing = muted while linking in process
- 3. MIC 2 STATUS:** lighted to indicate microphone is registered as MIC 2 (same behavior as MIC 1 status light above)
- 4. *EARBUD CONNECTION:** connect the 3.5mm earbud jack for monitoring (*for use with Flexcat Pods only)
- 5. CHARGING/LOW BATTERY INDICATOR:** lights red when charging, green when fully charged. When in operation, turns red to indicate low battery.
- 6. MICROPHONE VOLUME UP/DOWN**
- 7. AUDIO INPUT:** connect audio source to send to Redcat Access
- 8. LANYARD INTERFACE:** insert the lanyard into this hook to wear the Flexmike.
- 9. BATTERY DOOR:** remove the battery door to replace the rechargeable battery pack
- 10. REGISTRATION:** (inside battery compartment - not shown) only used when adding or replacing Flexmike.

SECTION 2:

SET-UP & USE

1. DETERMINE SET-UP LOCATION

The Redcat Access is shipped with a table stand connected and ready for use. Alternatively, the table stand 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:

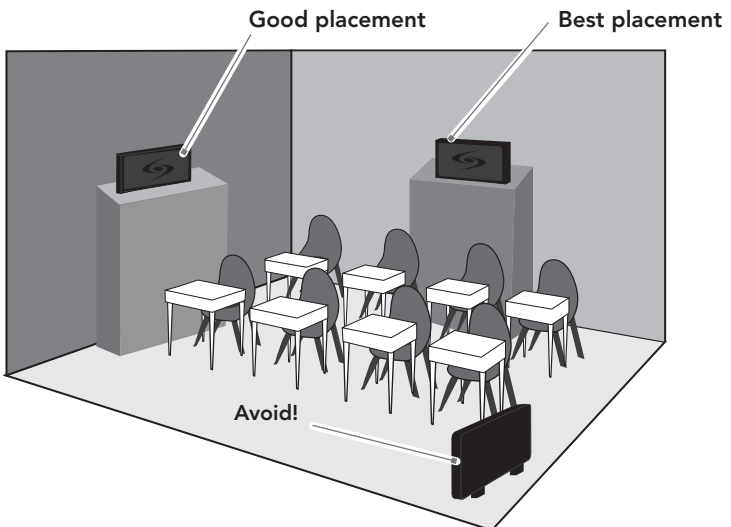
- More permanent setup
- Greater security

1A. TO SET-UP ON TABLE-TOP

First, consider that the Redcat Access 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 RCA next to where the teacher instructs. Putting the Redcat Access in close proximity to the teacher's mic can result in feedback.

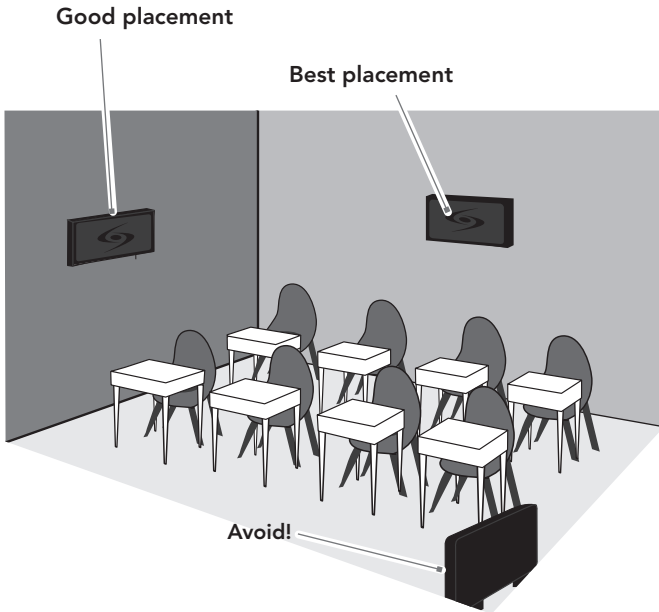


1B. TO SET-UP MOUNTED ON A WALL

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

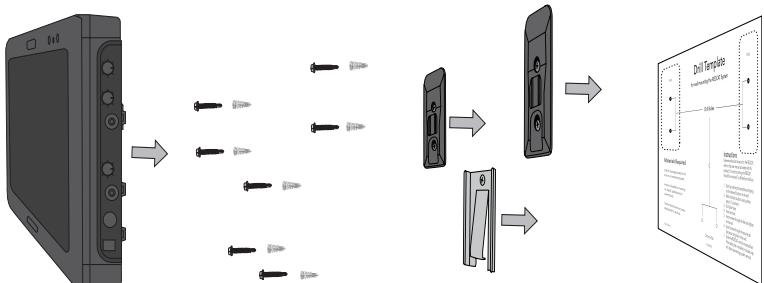
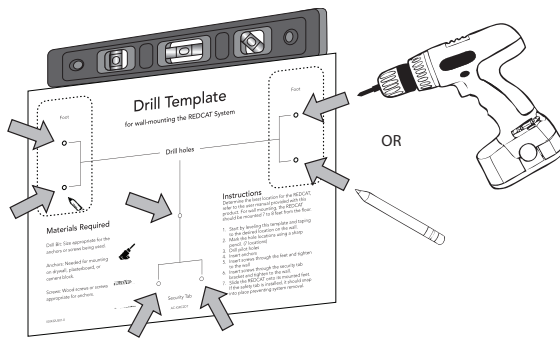
Next, find a location as far away as possible from the teacher who will be using the mic. The best place is centered on the long wall opposite

the teacher. If this is not possible, other good locations are on the wall next to the teacher. Avoid placing the RCA on any wall close to where the teacher usually stands to instruct the class. Having the teacher's mic too close to the RCA 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. Insert screws through the RCA feet into the anchors
6. If using optional security bracket, mount on wall using the provided screws and anchors
7. Slide the Redcat Access onto the wall mounted feet



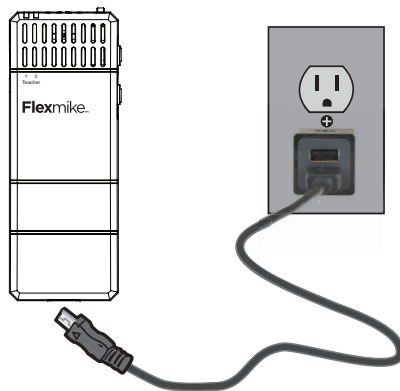
4. CHARGING THE FLEXMIKE

Before use, the Flexmike should be charged. It will take 8-9 hours for the Flexmike to obtain a full charge. A fully charged Flexmike will last for up to 8 hours of use. If microphones are used daily, they should be charged each night – microphones can be left charging constantly for up to 2 weeks without causing degradation to battery life.

When plugged into a charger, a red light on the Flexmike indicates the battery pack is charging. A green light indicates that charging is complete and a full charge has been reached. See Troubleshooting section for more information.

Replacement NiMH battery packs may only be purchased through Lightspeed Technologies (part # NH2.4). Do not attempt to charge with other battery packs. They can overheat and expand creating a significant hazard and damaging the microphone (this is not covered by warranty).

1. Plug wall charger into an electrical outlet.
2. Plug the USB charging cable(s) into the wall charger.
3. Plug the micro USB end of the charging cable into USB port on the bottom of the Flexmike. When the Flexmike is fully charged the LED on the mic will change to green.



5. OPERATING THE FLEXMIKE

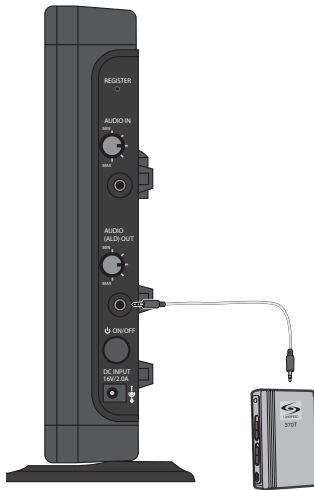
Once the Flexmike is charged, follow these steps to set it up for use.

1. Turn the Redcat Access power switch to the on position.
 2. Remove the Flexmike from the charging cable and put it on by connecting the magnetic clasps behind your neck. The Flexmike will automatically power on when it is left in the on position while charging.
 3. The microphone volume on the Flexmike is set at the factory to the mid point.
 4. 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.
 6. Once initial volume level is set, walk around the room and listen for overall audio quality.
 7. If further fine-tuning is required, you may need to adjust the Tone Control on the top of the RCA.
- 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.

OUTPUT TO ASSISTIVE LISTENING DEVICE (ALD)

1. Turn the ALD (Assistive Listening Device) volume control on the Redcat Access 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 370 Transmitter requires a 3.5mm to 3.5mm patch cable (part# MMC3535, 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
4. With the RCA and ALD turned on, speak into the Flexmike 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.



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 Flexmike requires the Lightspeed NH2.4 rechargeable sensing battery pack for proper charging.
- Make sure the microphones obtain a full charge. Full charge will last eight hours.
- When plugging the charging cable into the transmitter, ensure the red charging LED turns on. The green LED will turn on when a full charge is reached.

PROBLEM: Flexmike does not indicate a “Ready” signal (solid blue or red LED)

SOLUTION: Follow these steps to ensure the system is ready to use.

- Ensure the power switch on the Redcat Access is turned on.
- Ensure the power switch on the Flexmike is turned on. Once turned on, the LED should begin blinking.
- Power the unit off, then on again after a few seconds. Wait for up

to 30 seconds for the blue LED to turn solid, indicating READY for operation.

PROBLEM: Low Volume or Feedback

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

- Check volume level on the amplifier. If the volume is too high, feedback will occur. Adjust accordingly.
- Adjust the volume level on the Flexmike.

PROBLEM: No Sound From Amplifier

SOLUTION: Follow these steps to produce sound from speakers.

- Turn the Redcat Access on. Confirm that the POWER light located on the front panel is on.
- Confirm the Flexmike is linked to the Redcat Access. The mic 1 signal light will be green on RCA indicating a the Flexmike is linked.
- Confirm that Flexmike is turned on. There will be a blue LED on the top of microphone to indicate it is powered on.
- Confirm that Flexmike is not muted. A solid red LED on the top of microphone will indicate it is muted.

If you review these instructions and still have questions, 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.
- Mute the Flexmike during private conversations with a student, parent, or other classroom visitor. You can tell the mic is muted when the LED turns red.
- Recharge battery pack each night. When recharged nightly, operating time (actual usage) for the transmitters will last through a typical school day.

FCC Notice to user

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.

This equipment has been tested and found to comply with the limits for 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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful 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 (that is, the antenna for radio or television that is receiving" the interference).
- Reorient or relocate and increase the separation between the telecommunications equipment and receiving antenna.
- Connect the telecommunications equipment into an outlet on a circuit different from that to which the receiving antenna is connected.

FCC RF Radiation Exposure Statement

For body worn operation, the portable part (Flexmike) has been tested and meets FCC RF exposure guidelines.

This device must not be co-located or operating in conjunction with any other antenna or transmitter. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada Notice to user

English

This device complies with Industry Canada licence exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

French

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisee aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement

Canada RF Radiation Exposure Statement

English

Your mobile device is a radio transmitter and receiver. It is designed not to exceed the limits for exposure to radio waves (radio frequency electromagnetic fields) recommended by international guidelines. The guidelines were developed by Health Canada and include a substantial safety margin designed to assure the safety of all persons, regardless of age and health.

French

Votre appareil mobile est un émetteur-récepteur radio. Il est conçu pour ne pas dépasser les limites d'exposition aux ondes radio (champs électromagnétiques de fréquence radio) recommandées par les directives internationales. Les lignes directrices ont été élaborées par Santé Canada et comprennent une marge de sécurité importante destinée à assurer la sécurité de toutes les personnes, indépendamment de l'âge et de la santé.

NOTICE FOR USB

NOTE: Lightspeed is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for 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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 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.