

## CAT 855

### Troubleshooting Guide

Symptom		Problem Isolation Steps	Resolution
No sound from speaker	Verify	power on the amplifier is on and LED on the power button is glowing blue.	If not lit, verify all connections are snug from the AC connection to the power supply, and from the power supply to the amplifier. If all connections are secure, determine if the outlet is working or test with a known working power supply.
	Verify	power LED in middle of Light-speed logo is glowing blue in center of ISR module.	If not lit, check that Cat 5 cable is properly connected to both ISR and 855 amplifier.
	Check	if the "Sensor Short" LED on the rear of the amplifier is illuminated.	If the "Sensor Short" is illuminated, check cable for a short and replace if necessary. If that does not correct the problem, try replacing 855 amplifier or ISR.
	Check	volume on 855 amplifier.	Ensure amplifier volume is turned up to approximately the 9 o'clock position on both A and B mic volumes. If still no sound, try connecting another audio device to one of the inputs.
	Verify	the blue LED on wireless microphone is on.	If it does not come on, check batteries for charge and replace them if necessary. Check with known good microphone.
	Verify	the channel A or B LED's light on ISR sensor with wireless microphone on.	If the LED's do not light, try using a known good mic. If problem persists, troubleshoot ISR module. NOTE: Verify that the frequency of the microphone matches the frequency group of the ISR. G1=white/silver in color mic or marked with "G1". G2=black in color mic and/or marked with "G2".
	Verify	the red channel A or B LED's on the 855 amplifier modulate with voice.	These lights should modulate indicating an audio signal is reaching the amplifier. If these do not blink, try with a known good microphone.
	Check	cables going to speaker(s).	Ensure speaker cable is securely connected to both amplifier and speaker(s).
	Check	that speakers are properly wired to the amplifier.	If multiple speakers are connected to system and only one is not working, check wiring method and replace defective speaker if necessary.
Verify	PageFirst threshold setting on amplifier.	If PageFirst accessory is being used, check to make sure threshold adjustment is not turned up too high.	

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Static is heard from speaker	Check	that the battery(ies) being used in the microphones is charged and is the proper type.	Install the proper NiMH battery(ies) that is fully charged.
	Check	if two microphones are being used that they are on different channels.	If needed, change one microphone to the opposite channel.
	Check	ISR sensor placement.	Evaluate the ISR sensor location in the room and adjust as needed. It should be located near the center of the room on the ceiling, or centered along a long wall. Avoid placing it near obstructions such as beams, ceiling mounted equipment, suspended lighting, etc.
	Check	that the ISR sensor is located away from possible sources of IR interference.	Direct sunlight and Plasma monitors can adversely affect performance.
Feedback	Verify	that volume on amplifier is not set too high.	Reduce volume as needed until feedback issue is resolved. Remember the teacher should barely be able to hear his/her own voice at optimum volume levels.
	Check	that the microphone is being worn properly.	The top of the microphone should be worn at the level of the collar bone. Adjust the lanyard accordingly.
	Check	EQ settings on back of amplifier.	If feedback persists at proper volume levels, adjust any EQ setting in the 1K - 4K frequency range down until feedback ceases.
	Verify	proper speaker installation as per Lightspeed installation guide.	If needed, relocate the speaker to eliminate the feedback. Wall speakers should be at least 7 feet high and ceiling speakers should not be used in rooms with ceilings lower than 9 feet.
	Verify	that the original microphone works in another room.	If the problem persists in the other room, the microphone is likely the cause of the problem.
Background hum in audio	Check	if there are any external audio sources connected to inputs of the amplifier.	If yes, disconnect one input at a time until hum goes away. Insert ground loop isolator in-line with source causing the hum and reconnect.
	Verify	AC power connections.	Ensure all equipment is properly grounded.
	Verify	speaker and ISR module wiring.	Ensure wiring is run properly and suspended above fluorescent lighting. Verify that wiring does not parallel AC power lines for long distances.
	Verify	proper wiring of Cat 5 cable.	If Cat 5 cable has been reterminated, or if a different type third-party cable has been used, the new connector may be mis-wired. Replace with known good cable to verify.

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Low volume	Check	that the volume level on the amplifier is not set too low.	Set the volume indicator to approximately the 9 o'clock position and then adjust as needed for normal operation.
	Check	that microphone is being worn properly.	The microphone should be worn at the level of the collarbone.
	Check	the EQ settings on back of amplifier.	All bands should be set at the mid point.
	Test	a known good microphone on the same channel with the system.	If the volume level remains the same as the original microphone, the most likely cause of the problem is the amplifier or speakers.
	Check	volume level adjustment on back of wireless microphone.	If using a microphone with volume control, volume level may need to be increased.
Drop-out / intermittent operation	Check	if two microphones are being used that they are on different channels.	If needed, change one microphone to the opposite channel.
	Check	that there is no obstruction between the IR sensor and the microphone.	Make sure the microphone is not blocked by clothing or turned to face the user.
	Check	that the ISR sensor is located away from possible sources of ISR interference.	Direct sunlight and Plasma monitors can adversely affect performance.
	Check	that a known good microphone works with the system being tested.	If the intermittent operation stops, the original microphone is likely the cause of the problem. If the problem continues, the 855 or ISR sensor may be the cause of the problem.
	Check	proper connection of Cat 5 sensor cable.	Make sure the Cat 5 connector is fully inserted and locked into 855 amplifier.
	Verify	proper wiring of Cat 5 sensor cable.	If Cat 5 cable has been reterminated, or if a different type third-party cable has been used, the new connector may be mis-wired. Replace with known good cable to verify.
REDMIKE/ REDMIKE Vol- ume Control (RMT/RMV) will not power on	Check	that the correct battery is being used.	Use the Lightspeed NH2A27 NiMH rechargeable sensing battery as it is the only kind of battery that will properly charge with the RMT/RMV.
	Check	that the battery is installed properly.	Ensure that the polarity is observed.
	Check	that the battery is charged.	Substitute a known good battery and see if it charges in the microphone. If it does charge, replace worn or defective battery. Typical battery life is 1-2 years.
	Check	that battery contacts are not obstructed.	Ensure that there is no object preventing good contact between the battery and contacts.

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RMT/RMV won't charge	Verify	that the correct battery is being used.	Use the Lightspeed NH2A27 NiMH rechargeable sensing battery as it is the only kind of battery that will properly charge with the RMT/RMV.
	Check	that the RMT/RMV charging circuitry is working properly.	Substitute a known good battery and see if it charges in the microphone. If it does charge, replace worn or defective battery. Typical battery life is 1-2 years.
	Verify	that the RMT/RMV is being seated properly in the cradle charger.	When the RMT/RMV is properly inserted in the cradle, the LED on the charger should turn solid red.
	Verify	that the cradle charger is working properly.	The LED on the cradle charger should turn solid red when the microphone is inserted. If no LED's light, try using a known good cradle charger. (If there is a blinking red LED, that indicates a charging error most likely related to improper battery type.)
	Verify	that the cradle charger power supply is not damaged or defective.	Try known good charger power supply.
REDMIKE Share (RMS) will not power on	Check	that the correct battery pack is being used.	Use the Lightspeed NH2APK NiMH rechargeable sensing battery pack as it is the only kind of battery pack that will properly charge with the RMS.
	Check	that the battery pack is installed properly.	Ensure that the polarity is observed.
	Check	that the battery pack is charged.	Substitute a known good battery pack and see if it charges in the microphone. If it does charge, replace worn or defective battery pack. Typical battery life is 1-2 years.
	Check	that battery contacts are not obstructed.	Ensure that there is no object preventing good contact between the battery and contacts.
RMS won't charge	Verify	that the correct battery pack is being used.	Use the Lightspeed NH2APK NiMH rechargeable sensing battery pack as it is the only kind of battery pack that will properly charge with the RMS.
	Check	that the RMS charging circuitry is working properly.	Substitute a known good battery pack and see if it charges in the microphone. If it does charge, replace worn or defective battery pack. Typical battery life is 1-2 years.
	Verify	that the RMS is connected to the charging cable and the charging output on the REDMIKE cradle charger or amplifier.	Verify that the RMS power switch is off. When the RMS is connected to the charger, the LED on the microphone should turn solid red.
	Verify	that the charge cable is connected properly.	The charger connection is located on the bottom of the microphone..

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LT71 will not power on	Check	that the correct batteries are being used.	The LT71 uses two AA NiMH batteries for proper operation and charging. The Lightspeed NH1 is recommended for optimum use.
	Check	that the batteries are installed properly.	Ensure that the polarity is observed.
	Check	that the batteries are charged.	Substitute known good batteries and see if they charge in the microphone. If they do charge, replace worn or defective batteries. Typical battery life is 1-2 years.
	Check	that battery contacts are not obstructed .	Ensure that there is no object preventing good contact between the batteries and contacts.
LT71 won't charge	Verify	that the correct batteries are being used.	The LT71 uses two AA NiMH batteries for proper operation and charging. The Lightspeed NH1 is recommended for optimum use.
	Check	that the LT71 charging circuitry is working properly.	Substitute known good batteries and see if they charge in the microphone. If they do charge, replace worn or defective batteries. Typical battery life is 1-2 years.
	Verify	that the LT71 is connected to the charging cable and the charging output on the REDMIKE cradle charger or amplifier.	When the LT71 is connected to the charger, the LED on the microphone should turn solid red.

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