Voice System Troubleshooting

Problem: Operator Cannot Talk

*** Read this description of a working voice UHF voice system first to help you while troubleshooting your robot.**

A working system: When you turn on your transmitter, the red LED should blink on then go off to indicate you have power. The power LED on the receiver should be constantly on. When the transmitter is on either the A OR B diversity light should be on (indicating that you are receiving signal). When you speak into the microphone, the AF peak light will come on indicating that the receiver is receiving the audio spoken into the headset. If none of the following solutions help you solve your problem, please contact Robotronics 801-489-4466 Ext 3

Cause	Things to Check	Solution
Low or dead battery in the transmitter	The red LED should blink on when you turn the unit on. If it remains on, the battery is low, if it does not come on at all, replace the battery and bend out the battery clips.	Replace the battery or replace the transmitter if it still will not power up.
Battery not connecting to terminals in transmitter	Check to see if the clips are bent in or connecting to the battery	Bend the battery clips out a bit more. Put foam under them to keep them out.
Transmitter is in standby mode	Look at the switch. Standby will cause the transmitter to transmit signal, but NOT audio.	Turn the switch to the ON position.
No power to the receiver (indicated by the power LED)	1. See if the power button is pressed on. 2. Make sure that there is 12 volts going into the receiver.	1. If not, press it. 2. If there is no voltage going into the receiver, first check to see if the fuse is blown. If no fuse is blown, it may be a bad component on the board or a burnt trace and the electronics panel may need to be sent to Robotronics for repairs.
The diversity light (A or B) is not coming on. (This means no signal is being received)	The diversity light should come on when the transmitter is transmitting. Make sure that your transmitter is turned on. Check the squelch on the back of the receiver; it should be set at max sensitivity.	If the transmitter and receiver both have power and the squelch is turned up, the problem is an inner problem with either the transmitter or receiver and both units should be replaced or sent back for repair.
The audio wires going into the Voice Modifier are connected incorrectly.	The wire should go from audio out of receiver to input of pitch shifter, then from output A into the main box and plug on to the main board. You can try bypassing the voice modifier to make sure that is the problem or not.	If the voice modifier is the problem, make sure the power LED is on
Headset mic plug going into the transmitter is broken. Headset wiring has a bad connection at plug or along the wire.	You can wiggle the plug around to see if sound will cut in and out. You can unscrew the black barrel on the plug to inspect if any wires are loose or broken. If your robot mic is working, you can plug that into your belt transmitter. This will help you to know if the problem is with the headset mic or not.	Resolder the plug. Replace the plug. Replace the headset. Send the unit to Robotronics for repair.

Problem: Operator Cannot Hear Someone Talking to the Robot

*** Read this description of a working voice 151 voice system first to help you while troubleshooting your robot.**

A working system: Turn the robot on. When you turn the receiver on, the red LED should blink on then the green LED should come on (indicating it has signal). When you turn the robot on, the transmitter inside the robot (left front) should have a red LED light that blinks on then goes off (indicating it has power). If none of the following solutions help you solve your problem, please contact Robotronics 801-489-4466 Ext 3

Cause	Things to Check	Solution
Low or dead battery in the 151 VR receiver	The red LED should blink on when you turn the unit on. If it remains on, the battery is low, if it does not come on at all; the battery is most likely dead.	Replace the battery
Battery not connecting to terminals in receiver	Check to see if the clips are bent in or connecting to the battery	Bend the battery clips out a bit more. Put foam under them to keep them out.
The headset plug is broken. You cannot hear anything in the headset. Try a different headset or earphones from an mp3 player to verify this.	When turning on the receiver you will generally hear a "pop.'" If you hear no sound at all, you may want to unscrew the cover of the headset plug and inspect the wiring. Some plugs are molded and cannot be opened.	Bad plugs can be re-soldered, replaced or sent back to Robotronics for repair.
You hear intermittently when wiggling or twisting the plug. The plug is loose or broken, the jack on the receiver has broken solder, or the jack is worn out.	Look at the soldering on the receiver jack. Usually the jack will have a lot of play if the solder if it is broken.	Solder or replace the jack. Replace the headset plug.
If you have no TX light on 151 RX, mute could be out of adjustment	Check the mute adjustment on the side of the 151 RX with a small flathead screwdriver.	Adjust mute to fully Counter-Clockwise (CCW).
Transmitter inside robot is not getting power	Look for a disconnected or broken power wire going to the transmitter.	Re-connect the wire.
Transmitter inside the robot is in standby mode	Look at the switch. Standby will cause the transmitter to transmit signal, but NOT audio.	Turn the switch to the ON position.
Microphone in robot is bad	You can test this by using the mic on your headset. Plug your headset mic into the robot transmitter. If the transmitter in the robot is working, then you should hear your own voice when you talk into the mic.	Check for bad wiring. Replace the mic.

Note: If you need to replace the 151 system, there is a frequency on the back of the receiver that we need. There is also an upgrade for this which is a VR3U system that replaces the 151 system.

Other Voice Problems

Problem	Things to Check	Solution
Poor range. You cannot travel as far without experiencing cut outs.	Check your mute adjustments on both receivers. Check that operators units have new batteries. Broken antenna.	Replace batteries. Inspect antennas. Turn up the mute adjustments.
Static sounds constantly coming from robot.	See if operators transmitter is on (squelch is usually caused from interference and will generally not occur if your transmitter is on). Check the mute and see if it is turned up all the way.	Turn on the operator's transmitter. If the mute on the robot receiver is up all the way you may wish to turn it down (this will cause you to have a decrease in operational range, but will also reduce the chance of interference).

Problem	Things to Check	Solution
Loud squelch in the operators receiver when turning the robot off.	See if the mute is turned up all the way.	Turn the voice units off before you turn your robot off. Turn the mute down a bit (this will cause you to have a decrease in operational range, but will also reduce the chance of interference).