



Very often, folks who have just set-up their Harmony 900, or have suddenly developed issues where devices are no longer responding as expected, often think that their buttons are not working or their IR emitters are burned out or the RF receiver (aka 'Blaster') is not working. Though it is possible that any of these faults may have developed, there are a number of troubleshooting steps that should be taken before any hardware can be declared defective:

- 1) When devices don't respond as expected, the first and easiest thing to do with the 900 is to simply pull the battery. If you are using the Blaster, then unplug it as well. Follow these steps below:
  - Take the battery out of the 900
  - Unplug the power from the RF Blaster
  - Wait 30 seconds for residual power to dissipate
  - Put the battery back into the remote and allow it to fully reboot
  - Plug in the RF Blaster
- 2) If there is no change, then the next thing to do is put the 900 into Safe Mode and re-apply the firmware. To do this, remove the battery and, while holding down the 'off' button at the top of the remote, re-insert the battery. Continue holding the off button until the words 'Safe Mode' appears on the LCD. Then, release the off button, login to the Logitech software and, assuming you are using the Windows or Mac client, you should see 'Downloads' as an option at the top right of the screen. Click on Downloads and, on the next screen, click on Firmware. Follow the instructions on the screen. Once the FW update has completed, re-load your Activity and Device Profile so that the remote has a refreshed copy of your Activity/Device setup.
- 3) If devices are still not responding as expected, then it is time to verify your button mappings. First, it should be understood that, just because a button has been mapped to be used by a **Device**, these mappings do not automatically transfer to the **Activities** in the Logitech software. So, it is very important to first verify that the button that is unresponsive is, in fact, mapped! Check the Device Tab first under Customize Buttons and make sure that there is a command associated with the button. Then, switch over to each Activity that uses this button and, under Customize Buttons, ensure that the button is mapped to a command. If all is well there, proceed to Step 4 below.
- 4) Now that the button has been verified to be mapped for use, we now can determine if there is a physical hardware problem with the button itself. Pressing a button that has been mapped to be used, either by IR or RF, should result in a transmission signal icon displaying at the top of the LCD. If a button has been mapped to use IR from the remote, the transmit icon is a 'wave' and you should see this anytime a button is pressed that you would expect to send IR. If the button has been allocated to a device that is using the RF Blaster, then the transmit icon is a 'radio tower'. If you don't see any evidence of either icon displaying at the top of the LCD when a button is pressed, then it is likely that the tactile button dome underneath the rubber pad has become defective. You can try pressing the button with more force to see if you can get a response, though, if you are successful using more than normal pressure, then this is indicative of a failing button dome.

- 5) Assuming that pressing the button results in a transmit icon displaying, which kind of signal is being sent? Remember, a 'wave' means IR is being sent. 'Radio Tower' means that the 900 is sending an RF signal to the Blaster, which in turn is sending IR to the target device. **If you see the 'wave', then the remote must be in line-of-sight with the device that is being controlled!** If the device you are trying to control is behind cabinet doors or in a closet, the 900's native IR **cannot** be used and the device must be re-allocated to be controlled by the Blaster. *Adding and removing devices for Blaster control is done on the 900, not in the Logitech software* and this will be discussed in a moment. Now, if the device that is being controlled by IR is right in front of you (like the TV) and it is not responding to **any** command, then the button is not the problem. Either the wrong model TV has been chosen in the setup or the IR Emitters on the 900 have burned out. You can test to see if the emitters are defective by simply allocating the TV to be controlled by the Blaster and then seeing if the TV responds. Remember, the Blaster sends out IR and will need to be in line-of-sight of the TV for this testing. If nothing controls the TV, it is likely that the wrong model has been chosen in the setup.
- 6) If your 900 is sending out IR signals to devices that are not in-line-of-sight, then, of course, these devices will not respond. If you want to control a device that is hidden, it must be assigned to the RF Blaster. The function for Adding/Deleting Blasters can be found on the 900 under Options→RF System Settings→Advanced RF Settings. A Blaster must be 'Added' before it can be used. Once added, devices can be assigned to be controlled by the Blaster. Assignment is found under Options→RF System Settings→Device Assignment.
- 7) Finally, if the mapped button you are pressing is displaying the 'radio tower', then that means that the RF Blaster has been Added and the device has been assigned. So, what's going on? Well, there are a number of things that can go wrong in the communication between the 900 and the Blaster, all of which will have the effect of the device not responding to a button press. Generally, if you press a button and you get a red 'X' covering the radio tower, it means that the 900 could not successfully communicate with the Blaster. Sometimes, you will also get a message to that effect on the 900. These are the troubleshooting steps you can take to get the 900 and Blaster talking to each other again. They are similar to the first step in this series but go a little deeper.
- Take the battery out of the 900
  - Unplug the power from the RF Blaster
  - Wait 30 seconds for residual power to dissipate
  - Put the battery back into the remote and allow it to fully reboot
  - Plug in the RF Blaster
  - On the 900, press Options→RF System Settings→Advanced RF Settings→Remove Blaster
  - If you have more than one Blaster, select the one for removal that is giving you problems. If you are not sure which one, you can use the 'Identify Blaster' option first.
  - On the 900 press Options→RF System Settings→Advanced RF Settings→Add Blaster
  - Very important! When doing the Add Blaster function, you **must** place the 900 so that the front tip is touching/resting on the blaster (see picture below)



- 8) If the 900 cannot communicate with the Blaster during the Add routine, or the 900 wants to update the Blaster's firmware and this process freezes, try the following steps:
- Press and hold the red button on the back of the Blaster until all the lights go solid. This will reset the Blaster.
  - On the 900 press Options→RF System Settings→Advanced RF Settings.
  - Type the following numbers on the 900's keypad: 31337
  - Press ok to reset the remote. Now try adding the Blaster again. While adding, make sure that the remote is touching the top of the Blaster as in the picture.
- 9) Finally, let's say that the 900 is communicating via RF to the Blaster and you are not getting the red 'X' or any error messages. All the buttons are mapped correctly and the devices that are supposed to be controlled by the Blaster (or mini-blasters) are not responding at all. Then, there is the possibility that the IR emitters in the Blaster or in one of the minis have burned out. There is more than 1 IR emitter in the main Blaster and in the minis, so it is pretty rare for them to burn out in such a way as to no longer control your devices. Still, this will depend on the individual setup. So, how can we test to see if the IR emitters are working? You can use a digital camera or cell phone camera to check for IR bursts coming from the front and sides of the Blaster and/or minis. To do this, first you need to verify that your camera can 'see' IR, since many have IR filters built in. So, take the camera and, using a known good IR source, (another remote control, or even the 900 if it is using IR as well), press a button that you know should send an IR signal. Look at the front of the remote through the screen of the camera or cell phone and you should see white/blue flashes coming from the remote. Once you've verified that your camera can 'see' IR, then do the same test with the Blaster and the minis. Look at them as you press a button on the 900 that you know should be communicating with the Blaster. If the IR emitters in the Blaster and/or the minis are working, you should see the same white/blue flashes you saw before. Remember though, if you have used the Advanced Settings on the 900 to allocate device control to a certain port on the Blaster (A or B), then, if you press a button that is supposed to control that device, only the mini that has been allocated will respond! Don't assume that your main Blaster's IR emitters have burned out! Make sure that you are checking the correct IR blaster!

Questions? Need additional help? Contact us at [info@harmonyremoterepair.com](mailto:info@harmonyremoterepair.com)

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