



Often, Harmony users suspect a button is not working and the reason may have nothing to do with actual button hardware failure. It may be that the button is not mapped for use in an Activity, or there may be other issues related to IR (or RF) signal transmission, or configuration issues with devices that are in the setup. It is important to be able to differentiate actual physical button failure from these other, configuration-related issues, and luckily, this is very easy to do! Find your model listed below and review the button testing procedure that is listed. If your model is not listed, contact us for help and guidance.

Harmony 650/700

The Harmony 650/700 has two types of button contact technology; conductive carbon-tip and tactile button dome. All of the 'squishy' buttons on these models are the conductive-tip type, and the 'clickable' buttons, like the Vol/Chan toggles are tactile button domes. Although the repair process is different for each kind, the testing procedure is the same:

1. Place the remote down on a flat surface and, *without* starting any Activity, allow the LCD to go to 'sleep' (turn off). Now, without jostling the remote, so as not to disturb the tilt-sensor (motion sensor), press down on any button that you suspect is not working.
2. If the LCD lights up using normal pressure, then the actual button hardware is fine and any issues you may be having are not related to button failure. However, if you need to press multiple times, or with force, then there is something wrong with the actual button and/or contact surface. *You can test every button exactly the same way and it does not matter if the button is mapped for use or not.* Once you hit a button that starts an Activity, wait for the command sequence to complete, and you can continue testing any suspected defective button using the same process.
3. Although failing tactile button domes usually need to be replaced, typically what happens with the conductive tip buttons is that some oxidation occurs on the pad on the board and this prevents the conductive tip from making good contact. You can usually improve the performance by opening the 650 up, removing the rubber button pads and cleaning the conductive tips and the corresponding pads on the board with a product like DeoxIT D100L. This is superior to alcohol or using other methods to clean and improve conductivity.

Harmony 880/890 (all versions)

The Harmony 880/890 series uses tactile button domes; small, convex metallic discs that, when pressed down, make contact with the corresponding pad on the PCB. These discs can deform with time or develop microscopic pitting and corrosion and, most often, these tactile domes require replacement as cleaning the underside of the dome and pad on the PCB is not effective. Each button should respond with a *light* touch. If you need to use even slightly more pressure to activate a button (we call this 'lazy'), it is usually a good idea to replace it. The best way to test each button is to use the 'Glow' button as an indicator. The great thing about using the Glow button is that *every button can be tested, even without starting an Activity and even when a button is not mapped to be used.* This is the procedure:

1. Place the remote down on a flat surface and, without starting any Activity, allow the LCD to go to 'sleep' (turn off). Now, without jostling the remote, so as not to disturb the tilt-sensor (motion sensor), and, starting at the bottom of the remote, press a button using normal pressure.

2. If the LCD lights up using normal pressure, then the actual button hardware is fine and any issues you may be having are *not* related to button failure. However, if you need to press multiple times, or with force, then the tactile button dome is failing and should be replaced. Press the Glow button to turn off the LCD and test the next button and so on and so forth. Each button can be tested the same way until you hit one of the Activity buttons that surround the LCD, since, pressing one of these will actually start an Activity. But, once the Activity has started, each of the buttons that surround the LCD can be tested the same way (again, even if there is no command associated with a particular button).

Harmony One

The Harmony One uses tactile button domes; small, convex metallic discs that, when pressed down, make contact with the corresponding pad on the PCB. These discs can deform with time or develop microscopic pitting and corrosion and, most often, these tactile domes require replacement as cleaning the underside of the dome and pad on the PCB is not effective. Each button should respond with a *light* touch. If you need to use even slightly more pressure to activate a button (we call this 'lazy'), it is usually a good idea to replace it. This is the procedure:

1. Place the remote down on a flat surface and, without starting any Activity, allow the LCD to go to 'sleep' (turn off). Now, without jostling the remote, so as not to disturb the tilt-sensor (motion sensor), press down on any button that you suspect is not working.
2. If the LCD lights up using normal pressure, then the actual button hardware is fine and any issues you may be having are not related to button failure. However, if you need to press multiple times, or with force, then there is something wrong with the actual button and/or contact surface. *You can test every button exactly the same way and it does not matter if the button is mapped for use or not.*
3. If none of the hard-buttons are working, but the touch screen buttons are working, this is usually due to a failure in the button controller IC and replacement of the logic board is usually required. However, sometimes this symptom can be caused by a partially stuck button or a glitch in the firmware. So, first check for these possibilities. To test for a partially stuck button, massage each button to ensure that it has the correct travel and does not feel like it is partially depressed. Press each button firmly and see if there is any difference in travel. Often, buttons near the bottom of the remote, where the front cover begins to narrow, can become partially stuck. If all the buttons feel like they are moving correctly, then it's time to check for a power or firmware glitch. Try doing a battery-pull, wait 30 seconds and re-install. If the buttons are still not working, then try re-applying the Firmware using the Harmony Software. If there is still no change in behavior, the logic board generally needs to be replaced.

Harmony 900

The Harmony 900 uses tactile button domes; small, convex metallic discs that, when pressed down, make contact with the corresponding pad on the PCB. These discs can deform with time or develop microscopic pitting and corrosion and, most often, these tactile domes require replacement as cleaning the underside of the dome and pad on the PCB is not effective. Each button should respond with a *light* touch. If you need to use even slightly more pressure to activate a button (we call this 'lazy'), it is usually a good idea to replace it. This is the procedure:

1. Place the remote down on a flat surface and, *without* starting any Activity, allow the LCD to go to 'sleep' (turn off). Now, without jostling the remote, so as not to disturb the tilt-sensor (motion sensor), press down on any button that you suspect is not working. This should be done in a slightly darkened room, as you will need to watch if the *keypad backlight* goes on. Note that with the Harmony 900, the LCD will only go on if certain buttons are pressed, so the LCD cannot be used for this testing.

2. If the *keypad backlight* goes on when you press a button using normal pressure, then the actual button hardware is fine and any issues you may be having are not related to button failure. However, if you need to press multiple times, or with force, then there is something wrong with the actual button and/or contact surface. *You can test every button exactly the same way and it does not matter if the button is mapped for use or not.*
3. If none of the hard-buttons are working, but the touch screen buttons are working, this symptom can be caused by a partially stuck button or a glitch in the firmware. So, first check for these possibilities. To test for a partially stuck button, massage each button to ensure that it has the correct travel and does not feel like it is partially depressed. Press each button firmly and see if there is any difference in travel. Often, buttons near the bottom of the remote, where the front cover begins to narrow, can become partially stuck. If all the buttons feel like they are moving correctly, then it's time to check for a power or firmware glitch. Try doing a battery-pull, wait 30 seconds and re-install. If the buttons are still not working, then try re-applying the Firmware using the Harmony Software. If there is still no change in behavior, the remote cannot be repaired and logic board replacements for the Harmony 900 are usually not available, but check with us.

Harmony 1000/1100

The Harmony 1000/1100 uses tactile button domes; small, convex metallic discs that, when pressed down, make contact with the corresponding pad on the PCB. These discs can deform with time or develop microscopic pitting and corrosion and, most often, these tactile domes require replacement as cleaning the underside of the dome and pad on the PCB is not effective. Each button should respond with a *light* touch. If you need to use even slightly more pressure to activate a button (we call this 'lazy'), it is usually a good idea to replace it. This is the procedure:

1. Place the remote down on a flat surface and, *without* starting any Activity, allow the LCD to go to 'sleep' (turn off). Now, without jostling the remote, so as not to disturb the tilt-sensor (motion sensor), press down on any button that you suspect is not working. This should be done in a slightly darkened room, as you will need to watch if the *keypad backlight* goes on. Note that with the Harmony 1000/1100, the LCD will **not** go on when any of the hard-buttons on the pad to the right of the LCD are pressed, so the LCD cannot be used for this testing.
2. If the *keypad backlight* goes on when you press a button using normal pressure, then the actual button hardware is fine and any issues you may be having are not related to button failure. However, if you need to press multiple times, or with force, then there is something wrong with the actual button and/or contact surface. *You can test every button exactly the same way and it does not matter if the button is mapped for use or not.*
3. If **none** of the hard-buttons are working on the hard-button keypad, but the Activities and Off button *are* working, then the hard-button PCB board is defective and must be repaired or replaced. This is not a tactile dome problem, but is generally caused by damage to the ribbon cable that attaches this small board to the main PCB.

Questions? Need additional help? Contact us at info@harmonyremoterepair.com

www.harmonyremoterepair.com