In certain rare cases HedgeHog 4, RoadHog 4, Nano Hog 4, and Hoglet 4 may exhibit an issue with front panel key mismappings (sometimes referred to as "ghosting").

While this issue is unlikely to affect your console, High End Systems would like to share with you what to do should you find that your HedgeHog4, RoadHog 4, Nano Hog 4, or Hoglet 4 is exhibiting key mismapping behavior:

- Contact the High End Systems Service department.

- High End will verify the issue you are seeing is the result of key mismapping (ghosting) as described in this technical bulletin.

- High End Systems will then make arrangements to rectify the issue in the most expeditious manner possible up to and including replacement of the console with a like unit.

- For units out of warranty High End Systems will still perform the service free of charge.

- High End Systems will use its standard warranty policy as a guideline but due to the sensitive nature of this issue we will also extend warranty for this issue for units more than one year of age.

High End Systems recognizes that the replacement solution or returning a console for repair may not always be the best option. In this case, please review the technician qualifications, equipment list, and procedures outlined on pages 2 thru 6 of this document on how to resolve this issue.

WARNING!

The following procedures should only be attempted by qualified electronic technicians who meet the following prerequisites:

- Trained and capable of SMT rework per IPC-A-610D.
- Capable of reworking 0805 SMT components

Equipment required to properly execute the repair procedure:

- 2.5mm and 3mm Allen Wrenches
- Temperature controlled soldering station for RoHS compliant rework
- RoHS compliant solder
- Stereo microscope or magnifier sufficient for 0805 rework
- Solder braid
- Flux remover/cleaning solution
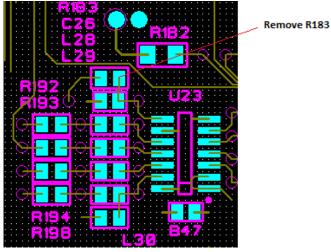
Procedure for RoadHog 4 / NanoHog 4:

(A) Disconnect Power to the console.

(B) Remove the front panel hardware using a 3mm Allen Key, and carefully open the front panel. The front panel can rest in notches at the rear of the front panel opening in the chassis. With NanoHog 4 you will have to remove the front panel rom the chassis and unplug power and USB connectors to rework the front panel.

WARNING: When removing the front panel ensure that you do not damage the USB or power cables and headers.

Remove R183

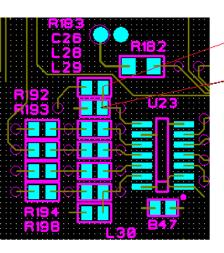(C) Locate U23. It will be on the left side of the front panel under faders 5 & 6.

(D) After locating U23, remove the 0805 resistor at reference designator R183.

(E) Install one 330Ω 0805 resistor (HES part number 90121040EF) at reference designator R183.

(F) Install one 10pF C0G 0805 MLCC (HES part number 90297008EF) at reference designator C26.

NOTE: Do not touch the MLCC with the soldering iron tip as this can result in micro-fractures and component failure.
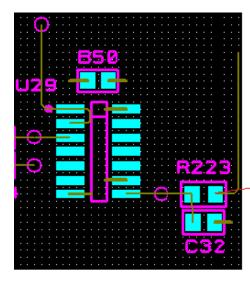
Install 330 ohm 0805 Resistor in R183 90121040EF

Install 10pF C0G 0805 MLCC in C26 90297008EF

(G) Locate U29. It will be just to the right of U28.

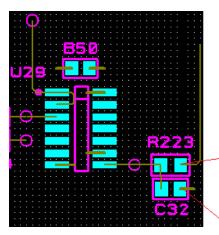(H) Remove the 0805 resistor at reference designator R223.

Remove R223

(I) Install one 330Ω 0805 resistor (HES part number 90121040EF) at reference designator R223.

(J) Install one 10pF C0G 0805 MLCC (HES part number 90297008EF) at reference designator C32.

NOTE: Do not touch the MLCC with the soldering iron tip as this can result in micro-fractures and component failure.
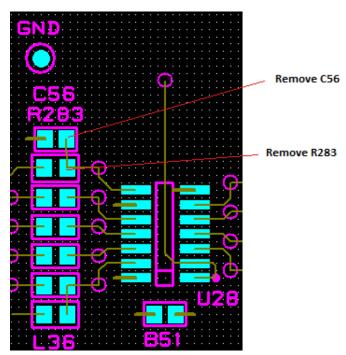
Install 330 ohm 0805 Resistor in R223 20121040EF

Install 10pF C0G 0805 MLCC in C32 90297008EF

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(K) Locate U28. It will be above and to the right of the large white header J8.

(L) Remove the 0805 resistor at reference designator R283.

(M) Remove the 0805 MLCC at reference designator C56.
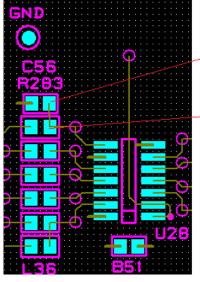
Remove C56

Remove R283

(N) Install one 330Ω 0805 resistor (HES part number 90121040EF) at reference designator R283.

(O) Install one 10pF C0G 0805 MLCC (HES part number 90297008EF) at reference designator C56.

NOTE: Do not touch the MLCC with the soldering iron tip as this can result in micro-fractures and component failure.

(P) Ensure that all reworked components are clean and free of flux.

NOTE: Do not get flux remover, or flux in any of the switches as this will damage them.

Install 10pF C0G 0805 MLCC in C56 90297008EF

Install 330 Ohm 0805 Resistor in R283 90121040EF

(Q) Reinstall the front panel and front panel hardware using the 3mm Allen key.
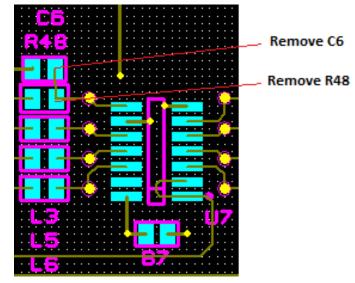
Procedure for HedgeHog 4:

(A) Disconnect Power to the console.

(B) Remove the front panel hardware using a 2.5mm Allen key, and carefully open the front panel. The front panel can rest in notches at the rear of the front panel opening in the chassis. *WARNING: When removing the front panel ensure that you do not damage the USB or power cables and headers.*

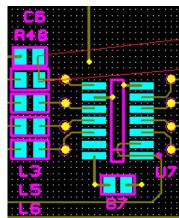(C) Locate U7 on the playback board, and remove the 0805 resistor at reference designator R48.

(D) Remove the 0805 MLCC at reference designator C6.

Remove C6

Remove R48

(E) Install one 330Ω 0805 resistor (HES part number 90121040EF) at reference designator R48.
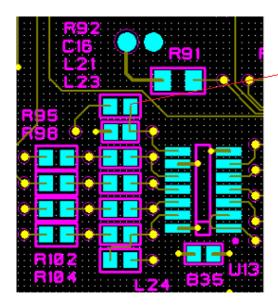
(F) Install one 10pF C0G 0805 MLCC (HES part number 90297008EF) at reference designator C6.

NOTE: Do not touch the MLCC with the soldering iron tip as this can result in micro-fractures and component failure.

Install 10pF C0G 0805 MLCC in C6 90297008EF

Install 330 Ohm 0805 Resistor in R48 90121040EF

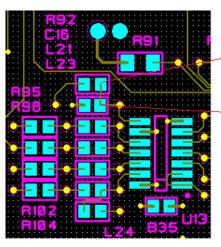(G) Locate U13 and remove the 0805 resistor at reference designator R92.

Remove R92

(H) Install one 330Ω 0805 resistor (HES part number 90121040EF) at reference designator R92.

(I) Install one 10pF C0G 0805 MLCC (HES part number 90297008EF) at reference designator C16.

(J) Ensure all reworked components are clean and free of flux.

NOTE: Do not get flux remover, or flux in any of the switches as this will damage them.

Install 330 Ohm 0805 Resistor in R92 90121040EF

Install 10pF C0G 0805 MLCC in C16 90297008EF

(K) Reinstall the front panel and front panel hardware using the 2.5mm Allen key.