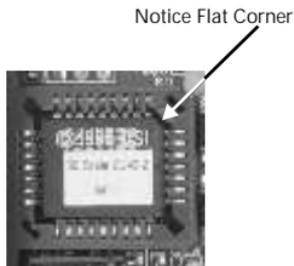
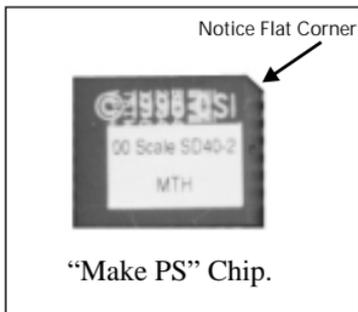


Force Chip Use for Proto-Sound Software Problems

The Make PS force chip was designed to reprogram original ProtoSound sound systems when the “Clank, Clank, Clank” is heard upon start up. This does not apply to engine equipped with ProtoSound 2.0.

When a (original) Proto-Sounds engine starts up and 3 clanks are heard this signals a software compatibility issue. Follow the instructions below when using the Make PS chip. Make sure the battery has a good charge.

- 1.) Completely power the engine down, turn off power to the Proto-Sound board and allow at least 15 seconds to pass after turning the power off. Listen for the confirming battery chirp sound after the engine sound has stopped.
- 2.) Remove the original chip using a chip extractor tool, as seen below.
- 3.) Install the “Make PS” chip. Make sure to align the chip in the socket properly.



- 4.) Apply 18 volts to the engine and listen for 2 bells sounds.
- 5.) Completely power the engine down (reference 1. above)
- 6.) Remove the “Make PS” chip using the chip extractor tool.
- 7.) Install the original sound chip. Make sure to align the chip in the socket correctly.
- 8.) Verify you have a good battery and perform Reset 18 to return the unit to factory default settings and check operation of the engine and Proto-Sound system.

NOTE: A battery is considered good when the engines sounds continue to play for 10-11 seconds after the track power is removed. When the sounds stop abruptly, immediately after power is removed, the battery charge is low and needs to be charged or the battery needs to be replaced.

If after using the “Make PS” chip and checking the operation of the engine (step 8) the engine gives 2 bells but won't come out of reset perform the following:

- 9.) Check the battery to be sure it has adequate charge to maintain power to the Proto-Sound board during momentary power interruption signals to exit reset.
- 10.) Verify voltage to the track is below 10 volts. Remember Proto-Sound equipped engines come up in RESET mode and will not leave the stationary RESET mode unless track voltage is less than 10 volts when power is momentarily interrupted to signal the direction.
- 11.) If the engine still will not leave RESET contact MTH Service.

If you have any questions during the use of the Force chip, contact a MTH Service Technician, 410-381-2580