

ITS8 (Ibanez Tube Screamer 808™ Replica) Modification Instructions

Version 2007August29

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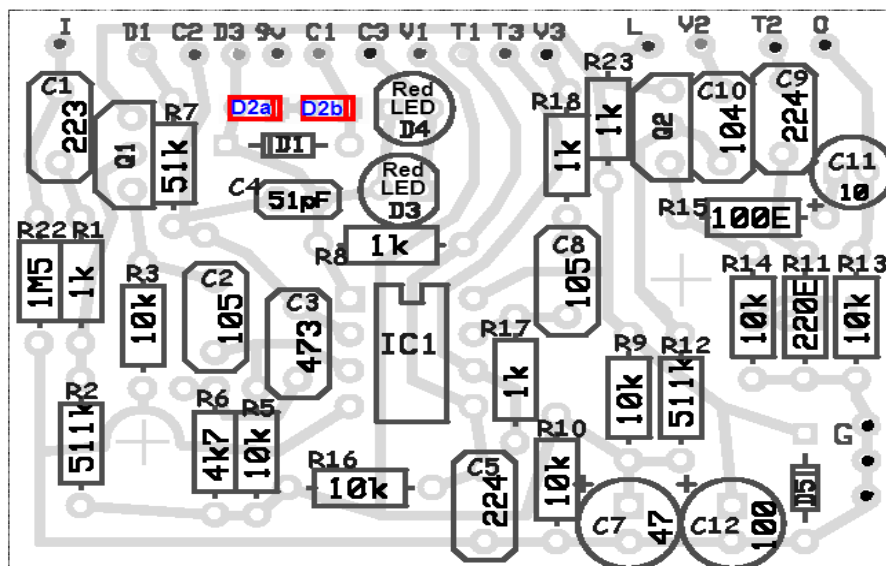
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This document describes some of the many modifications you can make to the **ITS8**.

Asymmetric Clipping Modification

The first modification is to add "asymmetric clipping". This is reported to make the distortion sound "more tube-like". Try it and judge for yourself, it will give a different kind of distortion that may be more to your liking. Just replace the one diode, **D2**, with two diode as shown in the diagram below. The layout has been designed to be able to put 2 diodes in this position standing on end as shown in the instructions photo.



Asymmetric Clipping Modification Diagram

Clipper Modifications

The base build of this project includes a toggle switch and clipping parts to switch between using silicon diodes (1N914) and red LED clippers. This is a great way to get a couple of different distortion sounds from the same box. There are many other electronic devices that can be used as clippers here in positions of the diodes or LED. Some choices are:

- Germanium Diode
- Silicon or any other type of diode
- LED (other colors)

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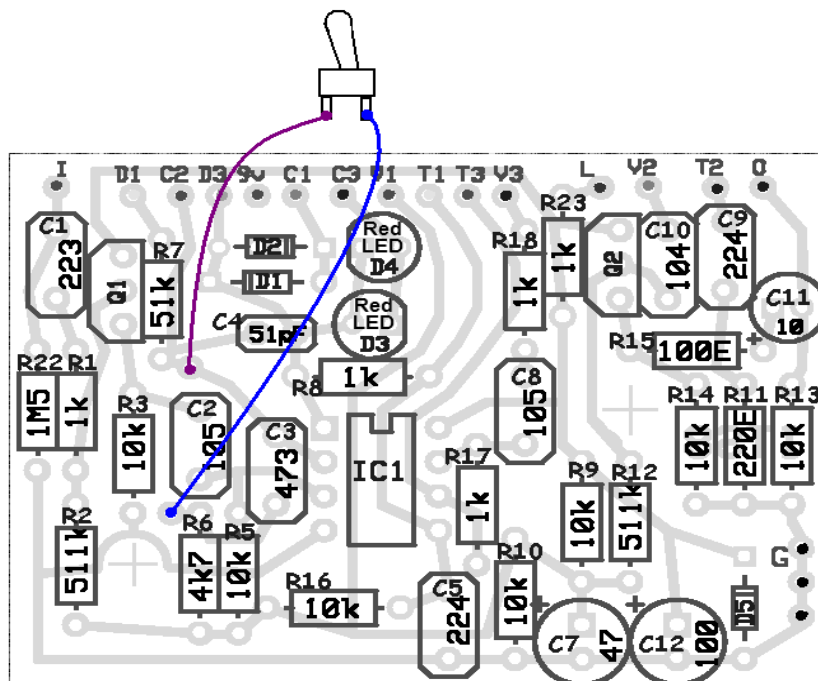
- Transistor
- MOSFET transistor

and many more. You can use combinations of any clipping devices and two or more in series, asymmetric arrangements, etc.

If you want more than 2 clipping options you can install a rotary switch and mount more clipping devices on the switch or use a small piece of perfboard or other material to mount clippers on another small circuit board.

AMZ Fat Modification

This modification is from the www.amzfx.com site. It is a switch that bypasses C3 and gives more boost and bass response to the sound. The PCB boards and kits we sell already have the holes for this modification.



AMZ Fat Modification Diagram

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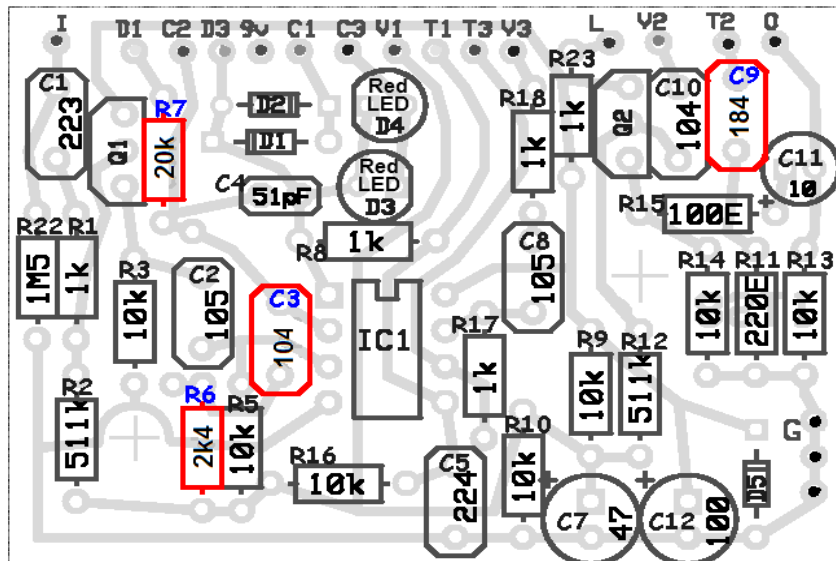
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Keeley 808 Reissue Modifications

According to the text on the Robert Keeley site, as far as we can tell, these are the modifications they do for the Ibanez TS 808 reissues. The other mods Keeley lists are not applicable to this project or are covered by other mods listed here. These mods should sound excellent on this project as well. The modifications will give better bass response, more distortion on the higher Drive settings and maybe a better sound on the lower drive settings. The modifications are:

- R6 replace 4k7 resistor with 2k4 resistor
- R7 replace 51k resistor with 20k resistor
- C3 replace 0.047uF with 0.1uF capacitor
- C9 replace 0.22uF with 0.18uF capacitor



Keeley 808 Reissue Modification Diagram

Diode Lift Modification

If you disconnect the diode clippers from the feedback loop of the first stage of the circuit, the ITS8 circuit can be used as a booster! The easy way to do this is to use a on-off-on style SPDT toggle switch for the diode clipper selector switch. Then the two sets of diodes can still be selected and the center off position allows for a booster

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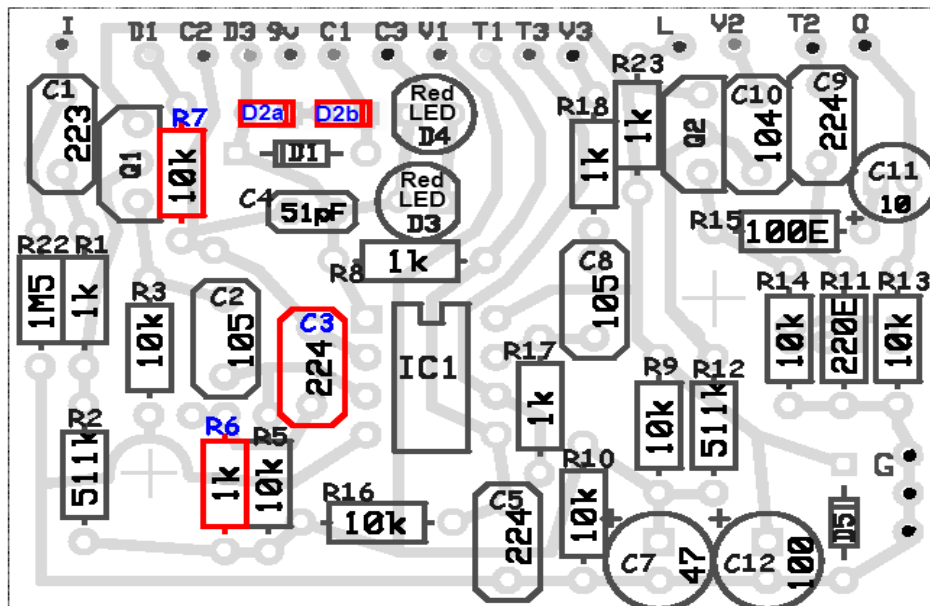
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option. The Kit comes with the on-off-on style toggle switch, so this modification is included in the kit.

Note that if you crank the drive up with the clippers lifted, you will get some very nasty distortion, you may or may not like it. To get the mostly clean boost, the drive is set to the lower settings and a mostly clean boost can be achieved. The boosted sound may have just a bit of distortion, this can be an excellent booster application for some rigs.

Expensive Boutique Modifications

These are the modifications for a well known very expensive boutique TS type overdrive circuit. We emphasize the word circuit, since you won't get the fancy paint job nor the "mystique" of one of the original units. Use the diode switching with diode lift on-off-on switch as shown above, also use the asymmetric clipping modification as shown above. Then use the part values shown below. Replace the Drive pot with a 1 Meg Log pot. This mod uses the same principles of increased gain as the Keeley mod and the AMZ Fat mod. Save yourself a few hundred dollars and enjoy!



Expensive Boutique Modification Diagram



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Other Modifications

IC Modifications

Try different ICs in your ITS8. The JRC4558D is supposed to be the magic IC, but other dual opamps will sound excellent and may suit your tastes better. Any dual opamp with the same standard pin layout is worth a try.

TS9

R13 - 100k

R15 - 470

TS10

R4 - 220 ohms

R13 - 100k

R15 - 470

Aron Nelson Modification Suggestions

R6 - 1K

C3 - 0.47uF

C5 - jumper

R19 - Replace the 500k log potentiometer with a 1M log potentiometer

Boss-SD1 Mods (according to the GM Arts schematic)

To make this circuit similar to a Boss SD1, substitute these values in the parts layout:

D1, D2a & D2b - 1N916 diodes

C1 - 0.047uf

R1 - 10k

R2 - 470k

R4 - jumper

C2 - 0.018uF

C5 - 0.018uF



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C6 - 0.01uF

C9 - 0.027uF

R8 - 10k

R17 - 10k

R18 - 4.7k

R19 - 1M pot

R21 - 10k pot

Solder a 33k resistor in series to leg 1 of the 1M pot (R19)