Let's Talk MIJ BF-2

by **Rich_S** » 04 Nov 2014, 18:07

I've been really loyal to the BF-2 for 30+ years. Okay, I confess... when I bought my first one, it was because it was small and ran on 9 volts, unlike all the other flangers of the time. However, I soon found that with the depth and regen cranked up it did a fair imitation of Pats Travers' & Thrall's A/DAs. With the manual delay all the way down and minimal regen, it came darned close to Andy Summers' Electric Mistress "giant chorus" sound, and thus became "my flanger" ever since. Sure, it was noisy, but as long as I remembered to switch it off before the last chord of Synchronicity II rang out, nobody could hear the hiss over the racket my guitar made.

Now, my BF-2 is 30 years old and I'm having trouble with the noise. I don't know if it has gotten noisier with age, or maybe I've gotten fussier with age. In many ways, though, it's still the perfect flanger for me. I love the sound, and the Boss form factor still rules all. My BF-2 sits perfectly between my CE-2 and my DD-3, so it's easy to hit those "two pedals with one stomp" combinations.

But that hiss is just getting to be embarrassing.

Where does the infamous BF-2 hiss come from? Unlike old tube amps, I doubt it's carbon comp resistors. Is it cheap op amps, or some unfixable product of the bucket brigade? If so, why isn't the CE-2 equally noisy?

Electrolytic caps are known to degrade over time, more so than most other types of components. Might replacing these help quiet it down?

Is there really any reason that it would get noisier over time, or is it just me? I don't really want to change its function or sound, but if I could just clean it up a bit, it could be my forever flanger.

Rich_S

Re: Let's Talk MIJ BF-2

by **Pepe** » 04 Nov 2014, 19:40

I had two MIJ BF-2 pedals with the old knobs last year. I didn't recognise too loud hissing noise. I don't know if replacing the electrolytic capacitors might cure it from that disease. It's the first thing I do when an old pedal reacts in a strange way.

Pepe

Re: Let's Talk MIJ BF-2

by **charmonder** » 04 Nov 2014, 20:09

I confess the old black knobs look way cooler than the new white knobs, but Is the sound much different than the newer ones?

charmonder

Re: Let's Talk MIJ BF-2

by **Pepe** » 04 Nov 2014, 20:13

No, I couldn't notice a difference sound-wise. I also had a Taiwanese BF-2 and I think it sounded the same. One of the Japanese pedals had increased resonance, but that was only because someone fiddled around with the trim-pot.

Pepe

Re: Let's Talk MIJ BF-2

by **Mark123** » 04 Nov 2014, 20:21

I think I have owned 3 BF-2s with black knobs, and one with grey knobs and they were all too noisy. Not overwhelmingly noisy, it's just that hiss that comes and goes with the flange wave. I keep buying them for the excellent flange and then selling them because of the annoying hiss. So 30 yrs is mightty long time!

Mark123

Re: Let's Talk MIJ BF-2

by **cctsim** » 04 Nov 2014, 22:18

For the hiss it helps to replace the 1uF electrolytic capacitors (C2,C11,C12,C24) in the signal path with metal film capacitors.

The IC1 and IC2 opamps can also be upgrated with something less noisy like the NE5532 or Burr Brown OPA2134PA, if you are willing to spend a bit more.

It is also worth replacing C25 that is also in the signal path.

These minimal changes bring a noticable improvement.

cctsim

Re: Let's Talk MIJ BF-2

by **Rich_S** » 04 Nov 2014, 22:30

THAT is the kind of info I'm looking for. I think I may try all of those upgrades. Now I kind of wish I hadn't sold off my spare BF-2; it would be good to do a before/after A/B test.

I always laugh when people express reluctance at the high cost of "good" op amps for pedal mods. An OPA2134PA is what... three dollars? Change it! I can see why the cost of an op amp matters if you're making half a million pedals, but for two ICs? Buy the good stuff.

What's a good replacement for those 0.1 uF caps? The brown Panasonics are getting hard to find. Are the BC Components box caps a good substitution?

To be clear, I haven't been using the same BF-2 for thirty years. My original got stolen in '84 (along with the van and all the other gear). After that I had a MIT one. In recent years I've owned several MIJs. The black knobs are better looking and have a more manly grip. However, I never noticed much difference among them all in sound.

Rich_S

Re: Let's Talk MIJ BF-2

by **Rich_S** » 05 Nov 2014, 15:33

What about the .22 caps for C17 and C20? Looking a schematic and layout, they appear to be signal-path electrolytics, too.

Rich_S

Re: Let's Talk MIJ BF-2

by **Dirk** » 05 Nov 2014, 19:41

Buy a newer model on Ebay.
Replace the white knobs with your old black knobs.
Treat it with equal respect for the next 30 years.
Problem solved.

Just kidding, try the upgrades and see what it does, good luck.

Dirk

Re: Let's Talk MIJ BF-2

by **Rich_S** » 05 Nov 2014, 21:11

Ha. I found what I think is a newer model for sale this morning. For $39, I'll deal with the gray knobs and not feel guilty about modding it. If it works on the cheap one, THEN I'll do the MIJ.

Rich_S

Re: Let's Talk MIJ BF-2

by **charmonder** » 05 Nov 2014, 21:56

good thinking, that's what I'd do. looks very manageable inside a BF-2 how all the hookup wires at the top of the PCB.: http://www.stompboxzone.com/forum/viewt ... =50#p16903
side note: orange label looks really cool!

charmonder

Re: Let's Talk MIJ BF-2

by **cctsim** » 06 Nov 2014, 15:23

> *Rich_S wrote:*
> *What's a good replacement for those 0.1 uF caps? The brown Panasonics are getting hard to find. Are the BC Components box caps a good substitution?*

A good replacement are the Arcotronics Polyester Box Capacitors. They come in small size up to 220nF and they sonically as good as the panasonic ones.

> *Rich_S wrote:*
> *What about the .22 caps for C17 and C20? Looking a schematic and layout, they appear to be signal-path electrolytics, too.*

Yes, those too. Initially, I thought C17 and C20 are tantalum types but I had a quick look inside my BF2 and they were electrolytics that I had them replaced with Arcotronics box capacitors.

cctsim

Re: Let's Talk MIJ BF-2

by **Dirk** » 06 Nov 2014, 17:26

> *Rich_S wrote:*
> *Ha. I found what I think is a newer model for sale this morning. For $39, I'll deal with the gray knobs and not feel guilty about modding it. If it works on the cheap one, THEN I'll do the MIJ.*

I like this variation of my idea, albeit a joke turned into reality....

Dirk

Re: Let's Talk MIJ BF-2

by **thealien666** » 14 Nov 2014, 13:50

...or you could do what I did: get rid of your noisy BF-2 and replace it with a perfectly silent BF-3...

thealien666

Re: Let's Talk MIJ BF-2

by **Pepe** » 14 Nov 2014, 14:06

Although it has no vintage mojo, the BF-3 is a really cool pedal. I also like it a lot.

Pepe

Re: Let's Talk MIJ BF-2

by **thealien666** » 14 Nov 2014, 19:13

And for those who would be tempted to argue that the BF-3 is digital and the BF-2 analog, with a more "organic" sound whatever that means, the truth is that in a band, surrounded by other musicians and sound sources, nobody can tell the difference. But everyone can hear that BF-2 hissing noise in soft, or silent passages though !

BTW, that hissing noise can be caused by, either a miscalibration of the clock signal reject trimpots, or the degradation of the thousands of internal capacitors making up those "buckets" in BBD chips, or a combination of the two over time.
Most probably the latter, if it appears slowly over time, and gets ever more audible as the months go by.

thealien666

Re: Let's Talk MIJ BF-2

by **Rich_S** » 16 Nov 2014, 05:50

Well, I done did it. I modded my BF-2. The cheap MIT fell through so I decided to just plunge ahead and mod the MIJ. It's a player, anyway; not a collection piece. It's pretty beat up and already modded for a a 9-volt adapter. I put in two OPA2134PA op amps, and replaced C2, C11, C12, C17, C20, and C24 with film caps.

What a pain in the ass.

I managed to shoe-horn a socket for IC1, but no way to do that for IC2. So that one, I had to solder directly in. The film caps were all WAY bigger than the originals, so there was a lot of lead-bending to make them fit. One cap, I had to extend it's leads and lay it on top of an adjacent IC, since there was no way it was going to squeeze in between the surrounding components.

It's too late to try it through my rig tonight, but I'll see tomorrow if it's any quieter. It'd better be, after all that.

Rich_S

Re: Let's Talk MIJ BF-2

by **Dirk** » 16 Nov 2014, 13:10

Have you tested if it works at all? Before putting it in front of an audience and wondering why you have no sound?

Dirk

Re: Let's Talk MIJ BF-2

by **Mark123** » 16 Nov 2014, 17:46

Are you mixing up rig and gig, Dirk?

Mark123

Re: Let's Talk MIJ BF-2

by **Rich_S** » 16 Nov 2014, 19:52

> *Dirk wrote:*
> *Have you tested if it works at all? Before putting it in front of an audience and wondering why you have no sound?*

Yes, I tested it after every step. It's working. I just don't know if its any quieter.

Rich_S

Re: Let's Talk MIJ BF-2

by **Dirk** » 17 Nov 2014, 19:13

> *Mark123 wrote:*
> *Are you mixing up rig and gig, Dirk?*

Nope, said it as I meant it. It would've been extremely crappy if he found out his pedal didn't work at a gig, if he hadn't tested it first.
A million things can go wrong when repairing/modding a pedal. Better if you find out about this at home.

Luckily, Rich_S was clever enough to do this.

Dirk

Re: Let's Talk MIJ BF-2

by **Ricey** » 21 Dec 2014, 18:38

I had both a white knob MIT and a Black Knob MIJ BF-2. They sounded a little different to me. The MIJ adds a very "sparkly" "acoustic" like character to a clean electric sound. The flanging sounded a bit subtler than the MIT. The MIT had more of that heavy "blanket over the speaker" sound. The MIT was probably better for that heavy jet airplane sound, but I preferred the MIJ, so I sold the MIT, since I also have an MXR EVH Flange, which does that Jet Airplane thing very well.

Ricey

Re: Let's Talk MIJ BF-2

by **Fallen_lassen** » 23 Dec 2014, 00:37

And what About the pink label mit. Someone in the netherlands is asking 275€ for it. Seems insane

Fallen_lassen

Re: Let's Talk MIJ BF-2

by **Dirk** » 23 Dec 2014, 12:20

Do they mean 27,50 perhaps? Must be a mistake. MIT BF-2's can be bought for 30 euros on Ebay.

Dirk

Re: Let's Talk MIJ BF-2

by **Fallen_lassen** » 23 Dec 2014, 22:44

ITS listed At 275 I read bossarrea and it is supposed to be a rare one Crazy price

Fallen_lassen

Re: Let's Talk MIJ BF-2

by **Dirk** » 24 Dec 2014, 11:54

In terms of "Make that the cat wise" they will stay sitting with it....!

Dirk

Re: Let's Talk MIJ BF-2

by **sferre** » 04 Sep 2016, 16:29

Hi all,

Indeed, i find the MIT a bit more agressive too. The MIJ is a little warmer to my hear. I won't say it is better, it depends on what you prefer.
I made a small video comparing both:
https://www.youtube.com/watch?v=ukAciKq5CXY

Cheers

sferre

Re: Let's Talk MIJ BF-2

by **jjone** » 05 Sep 2016, 18:58

> *Rich_S wrote:*
> *Well, I done did it. I modded my BF-2. The cheap MIT fell through so I decided to just plunge ahead and mod the MIJ. It's a player, anyway; not a collection piece. It's pretty beat up and already modded for a a 9-volt adapter. I put in two OPA2134PA op amps, and replaced C2, C11, C12, C17, C20, and C24 with film caps.*
>
> *What a pain in the ass.*
>
> *I managed to shoe-horn a socket for IC1, but no way to do that for IC2. So that one, I had to solder directly in. The film caps were all WAY bigger than the originals, so there was a lot of lead-bending to make them fit. One cap, I had to extend it's leads and lay it on top of an adjacent IC, since there was no way it was going to squeeze in between the surrounding components.*
>
> *It's too late to try it through my rig tonight, but I'll see tomorrow if it's any quieter. It'd better be, after all that.*

Sincerely, I did not understand whether this mod has decreased or not the noise of the pedal and, more generally, if there was an improvement in the sound.

I have a 1982 black label BF2 that has the same hiss noise and I would understand if it's worth making this upgrade or not

jjone