
Subject: tubes vs solid state vs transformers vs transformerless

Posted by [DJ](#) on Fri, 30 Nov 2007 22:13:02 GMT

[View Forum Message](#) <> [Reply to Message](#)

I recently purchased a Millennia SST-1.

<http://www.mil-media.com/stt-1.html>

I have been playing around with it a bit today with various tube/ solid state/transformer/transformerless settings on tube and solid state condenser mics.

It's just a matter of pushing a couple of buttons to dispel the notion that a tube circuit has "anything" at all to do with what is bandied about as "warmth". There is definitely a difference in the sonic footprint between solid state and tube. the "furriness" of tubes as opposed to a class "A" solid state circuit is very obvious with this preamp and both have their appropriate applications, but this unit displays the qualities of what a transformer does in such an obvious and dramatic way that there should be one of these set up in every audio habedashery on earth, just to put to rest the "myths" of tube vs solid state and to demonstrate what a transformer does to a signal.....I mean...it's not at all subtle.

It's been an interesting experience here. The tube circuit sounds good with tube mics on this particular unit which is a pairing I've come to avoid more often than not on a lo of contemporary studio gear and with my decidedly squeaky clean and extremely detailed SPA U87, the smoothest and "phattest" sound occurs when pairing with all solid state circuitry with the transformer switched into the signal path. It sounds very close to the Neve Portico 5042.....but like I said.....if you've ever been curious about what these various factors will impart to a circuit and you are in a locale where one of these units can be demo'ed.....just do it. It's worth a thousand "this vs that" articles.

Deej

Subject: Re: tubes vs solid state vs transformers vs transformerless

Posted by [AlexPlasko](#) on Sat, 01 Dec 2007 00:06:31 GMT

[View Forum Message](#) <> [Reply to Message](#)

I love high end preamps.looks like an excellent choice DJ.how do the compressor variations sound?

"DJ" <animix_at_animas_dot_net> wrote in message news:47508bff@linux...

>I recently purchased a Millennia SST-1.

>

> <http://www.mil-media.com/stt-1.html>

>
> I have been playing around with it a bit today with various tube/ solid
> state/transformer/transformerless settings on tube and solid state
> condenser mics.
>
> It's just a matter of pushing a couple of buttons to dispel the notion
> that a tube circuit has "anything" at all to do with what is bandied about
> as "warmth". There is definitely a difference in the sonic footprint
> between solid state and tube. the "furriness" of tubes as opposed to a
> class "A" solid state circuit is very obvious with this preamp and both
> have their appropriate applications, but this unit displays the qualities
> of what a transformer does in such an obvious and dramatic way that there
> should be one of these set up in every audio habedashery on earth, just to
> put to rest the "myths" of tube vs solid state and to demonstrate what a
> transformer does to a signal.....I mean...it's not at all subtle.
>
> It's been an interesting experience here. The tube circuit sounds good
> with tube mics on this particular unit which is a pairing I've come to
> avoid more often than not on a lo of contemporary studio gear and with my
> decidedly squeaky clean and extremely detailed SPA U87, the smoothest and
> "phattest" sound occurs when pairing with all solid state circuitry with
> the transformer switched into the signal path. It sounds very close to the
> Neve Portico 5042.....but like I said.....if you've ever been curious
> about what these various factors will impart to a circuit and you are in a
> locale where one of these units can be demo'ed.....just do it. It's worth
> a thousand "this vs that" articles.
>
> Deej
>
>
>

Subject: Re: tubes vs solid state vs transformers vs transformerless

Posted by [Neil](#) on Sat, 01 Dec 2007 02:52:37 GMT

[View Forum Message](#) <> [Reply to Message](#)

"DJ" <animix _ at _ animas _ dot _ net> wrote:

>I recently purchased a Millennia SST-1.

>
><http://www.mil-media.com/stt-1.html>

That fuckin' RAWKS! I want it in the Platinum finish <drool,
drool> lol. :D

>It's just a matter of pushing a couple of buttons to dispel
>the notion that a tube circuit has "anything" at all to do
>with what is bandied about as "warmth".

A few years ago, ISTR a discussion here that was actually spurred by a Scott Dorsey response to something I posted on r.a.p., and he was essentially stating that what most people perceive as "tube warmth", is really "iron warmth" - not his words, but i'm paraphrasing. IOW, transformers happen to exist in all true (i.e.: NOT starved-plate) tube circuits, and so when people hear tube channels/preamps/whatever, they hear that "warm" sound - they think its the tubes, but it's not, it's the BIG IRON!

>There is definitely a difference in the sonic footprint
>between solid state and tube. the "furriness" of tubes as
>opposed to a class "A" solid state circuit is very obvious
>with this preamp

Here's a good test - it's a simple no-brainer kinda thing, but IMO, it displays "wooliness", or lack thereof, better than anything else... just go up to your mic and get within six inches or so, and sing a single note, somewhere between an "Ahhhhh" and an "Uhhhhh" and hold that note for a few seconds. Compare that to the same tube mic in a solid state preamp or a non-tube mic through the previous tube preamp, etc.

"Wool" will either ensue - or not.

Warmth - however - is different... has to do with the iron in the circuit... I tend to agree with Dorsey's observations on this.

Neil

Subject: Re: tubes vs solid state vs transformers vs transformerless

Posted by [DJ](#) on Sat, 01 Dec 2007 03:14:42 GMT

[View Forum Message](#) <> [Reply to Message](#)

"Neil" <OIUOIU@OI.com> wrote in message news:4750be65\$1@linux...

>

> "DJ" <animix _ at _ animas _ dot _ net> wrote:

>>I recently purchased a Millennia SST-1.

>>

>><http://www.mil-media.com/stt-1.html>

>

> That fuckin' RAWKS! I want it in the Platinum finish <drol,

> drol> lol. :D

>

>>It's just a matter of pushing a couple of buttons to dispel

>>the notion that a tube circuit has "anything" at all to do
>>with what is bandied about as "warmth".
>
> A few years ago, ISTR a disussion here that was actually
> spurred by a Scott Dorsey response to something I posted on
> r.a.p., and he was essentially stating that what most people
> perceive as "tube warmth", is really "iron warmth" - not his
> words, but i'm paraphrasing. IOW, transformers happen to exist
> in all true (i.e.: NOT starved-plate) tube circuits, and so
> when people hear tube channels/preamps/whatever, they hear
> that "warm" sound - they think its the tubes, but it's not,
> it's the BIG IRON!
>
>>There is definitely a difference in the sonic footprint
>>between solid state and tube. the "furriness" of tubes as
>>opposed to a class "A" solid state circuit is very obvious
>>with this preamp
>
> Here's a good test - it's a simple no-brainer kinda thing, but
> IMO, it displays "wooliness", or lack thereof, better than
> anything else... just go up to your mic and get within six
> inches or so, and sing a single note, somewhere between
> an "Ahhhhh" and an "Uhhhhh" and hold that note for a few
> seconds. Compare that to the same tube mic in a solid state
> preamp or a non-tube mic through the previous tube preamp, etc.
>
> "Wool" will either ensue - or not.
>
> Warmth - however - is different... has to do with the iron in
> the circuit... I tend to agree with Dorsey's observations on
> this.
>
> Neil

Neil,

The tube circuitry in this pre, really imparts a different timbre to the signal. Some perception of air in the 6.5k and up frequency range without any shelving boost or low cut. There's just some sparkle, just like you hear with a tube circuit in a mic. Sometimes pairing two tube circuits like that can just be too much and that sparkle becomes harshness/distortion. This particular pre, though maybe a bit noisier in the tube circuit than the SS circuit when driven hard, is one of the few that I have tried that I like when paired with the tube mics I've got here. Perhaps that's because these tube mics I've tried it with (SE Gemini, Peluso and Manley) all have pretty hot output stages so I'm not really needing to drive the tube circuit in the preamp that much, but there's something else too. I've got other tube pres here that don't play as nice with my tube mics so go figure. At any rate, I

wouldn't mind having a few of these in my rack. The literature states that there are over 134 different circuit combinations possible by switching the different options in and out.

Subject: Re: tubes vs solid state vs transformers vs transformerless

Posted by [DJ](#) on Sat, 01 Dec 2007 06:38:38 GMT

[View Forum Message](#) <> [Reply to Message](#)

The EQ is a thing of beauty Don. Sweetness man.....major headroom when boosting. I like the EQ section in my Avalon 737 and use it a lot during mixes in subtracive mode more than anything else. It just doesn't have the mojo when boosting that the SST's EQ seems to have so far in my testing.

;o)

"DC" <dc@spammersinhell.com> wrote in message news:475100d0\$1@linux...

>

> Good stuff man.

>

> Tubes also exhibit group delay (frequency bands moving around in time)

> and this is a good thing or bad thing depending on the application.

>

> Also, transformers do not have to color things at all. The trannies that

> people are reproducing today are based upon ones that did, but it is not

> inherent in the technology.

>

> This mic pre

>

> <http://www.johnhardyco.com/M-1details.html>

>

> is cleaner and more detailed than the Millenia IMO, and uses the

> Jensen JT-16-B transformer:

>

> http://www.jensen-transformers.com/mic_in.html

>

> I have a handbuilt version of it I use on orchestras that is so clear and

> transparent that I have never heard anything as good in 20 years, and

> yes it has input transformers. Deane Jensen's mission in life was to

> take

> the color out of transformers and make them more musical and he

> succeeded. I asked him once how a transformer could make something

> more clean and clear than without one. Seemed impossible to me.

> He said that the problems the tranny solved are orders of magnitude worse

>

> than the ones that remain with a proper transformer.

>

> But we have found musical uses for the transformers that were colored

> and "inferior". So it goes.
>
> Here is what Millennia say:
>
> Input Transformer Option
> Millennia circuits are inherently
> transformerless: it's the truest path
> to the accuracy and realism we seek.
> But on aggressive sources such as
> drums and electric bass, we're also
> fans of transformer-coupled inputs
> such as Rupert Neve's original
> Class-A, all-discrete designs from
> the 1960s. Our custom MIT-01
> transformer provides its own "fat,"
> euphonic coloration, adding pleasing
> distortion at high dynamic
> levels and wide frequency excursions.
> It may not be lifelike, but the
> larger than life sound can really cut
> through a mix.
>
>
> Deane would run screaming from the room.. heh heh
>
> I still want one of those STT-1's though...
>
> How do you like the EQ?
>
> DC
>

Subject: Re: tubes vs solid state vs transformers vs transformerless
Posted by [DJ](#) on Sat, 01 Dec 2007 07:04:28 GMT
[View Forum Message](#) <> [Reply to Message](#)

Well.....now there's an excuse to come to Colorado if I ever heard one.

;o)

"DC" <dc@spammersinhell.com> wrote in message news:475106eb@linux...

>
> I wish you were nearby, I would love to punch my electric 6-string
> in there with that EQ....
>
>
> DC

>
>
> "DJ" <animix _ at _ animas _ dot _ net> wrote:
>>The EQ is a thing of beauty Don. Sweetness man.....major headroom when
>>boosting. I like the EQ section in my Avalon 737 and use it a lot during
>
>>mixes in subtracive mode more than anything else. It just doesn't have the
>
>>mojo when boosting that the SST's EQ seems to have so far in my testing.
>>
>>;o)
>>
>>"DC" <dc@spammersinhell.com> wrote in message news:475100d0\$1@linux...
>>>
>>> Good stuff man.
>>>
>>> Tubes also exhibit group delay (frequency bands moving around in time)
>>> and this is a good thing or bad thing depending on the application.
>>>
>>> Also, transformers do not have to color things at all. The trannies
>>> that
>>> people are reproducing today are based upon ones that did, but it is not
>>> inherent in the technology.
>>>
>>> This mic pre
>>>
>>> <http://www.johnhardyco.com/M-1details.html>
>>>
>>> is cleaner and more detailed than the Millenia IMO, and uses the
>>> Jensen JT-16-B transformer:
>>>
>>> http://www.jensen-transformers.com/mic_in.html
>>>
>>> I have a handbuilt version of it I use on orchestras that is so clear
> and
>>> transparent that I have never heard anything as good in 20 years, and
>>> yes it has input transformers. Deane Jensen's mission in life was to
>
>>> take
>>> the color out of transformers and make them more musical and he
>>> succeeded. I asked him once how a transformer could make something
>>> more clean and clear than without one. Seemed impossible to me.
>>> He said that the problems the tranny solved are orders of magnitude
>>> worse
>>>
>>> than the ones that remain with a proper transformer.
>>>
>>> But we have found musical uses for the transformers that were colored

>>> and "inferior". So it goes.
>>>
>>> Here is what Millennia say:
>>>
>>> Input Transformer Option
>>> Millennia circuits are inherently
>>> transformerless: it's the truest path
>>> to the accuracy and realism we seek.
>>> But on aggressive sources such as
>>> drums and electric bass, we're also
>>> fans of transformer-coupled inputs
>>> such as Rupert Neve's original
>>> Class-A, all-discrete designs from
>>> the 1960s. Our custom MIT-01
>>> transformer provides its own "fat,"
>>> euphonic coloration, adding pleasing
>>> distortion at high dynamic
>>> levels and wide frequency excursions.
>>> It may not be lifelike, but the
>>> larger than life sound can really cut
>>> through a mix.
>>>
>>>
>>> Deane would run screaming from the room.. heh heh
>>>
>>> I still want one of those STT-1's though...
>>>
>>> How do you like the EQ?
>>>
>>> DC
>>>
>>
>>
>

Subject: Re: tubes vs solid state vs transformers vs transformerless
Posted by [dc\[3\]](#) on Sat, 01 Dec 2007 07:36:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Good stuff man.

Tubes also exhibit group delay (frequency bands moving around in time) and this is a good thing or bad thing depending on the application.

Also, transformers do not have to color things at all. The trannies that people are reproducing today are based upon ones that did, but it is not inherent in the technology.

This mic pre

<http://www.johnhardyco.com/M-1details.html>

is cleaner and more detailed than the Millennia IMO, and uses the Jensen JT-16-B transformer:

http://www.jensen-transformers.com/mic_in.html

I have a handbuilt version of it I use on orchestras that is so clear and transparent that I have never heard anything as good in 20 years, and yes it has input transformers. Deane Jensen's mission in life was to take the color out of transformers and make them more musical and he succeeded. I asked him once how a transformer could make something more clean and clear than without one. Seemed impossible to me. He said that the problems the tranny solved are orders of magnitude worse

than the ones that remain with a proper transformer.

But we have found musical uses for the transformers that were colored and "inferior". So it goes.

Here is what Millennia say:

Input Transformer Option
Millennia circuits are inherently

to the accuracy and realism we seek.
But on aggressive sources such as

fans of transformer-coupled inputs

Class-A, all-discrete designs from
the 1960s. Our custom MIT-01

euphonic coloration, adding pleasing
distortion at high dynamic
levels and wide frequency excursions.
It may not be lifelike, but the
larger than life sound can really cut
through a mix.

Deane would run screaming from the room.. heh heh

I still want one of those STT-1's though...

How do you like the EQ?

DC

Subject: Re: tubes vs solid state vs transformers vs transformerless

Posted by [dc\[3\]](#) on Sat, 01 Dec 2007 08:02:03 GMT

[View Forum Message](#) <> [Reply to Message](#)

I wish you were nearby, I would love to punch my electric 6-string in there with that EQ....

DC

"DJ" <animix _ at _ animas _ dot _ net> wrote:

>The EQ is a thing of beauty Don. Sweetness man.....major headroom when
>boosting. I like the EQ section in my Avalon 737 and use it a lot during

>mixes in subtracive mode more than anything else. It just doesn't have the

>mojo when boosting that the SST's EQ seems to have so far in my testing.

>

>;o)

>

>"DC" <dc@spammersinhell.com> wrote in message news:475100d0\$1@linux...

>>

>> Good stuff man.

>>

>> Tubes also exhibit group delay (frequency bands moving around in time)

>> and this is a good thing or bad thing depending on the application.

>>

>> Also, transformers do not have to color things at all. The trannies that

>> people are reproducing today are based upon ones that did, but it is not

>> inherent in the technology.

>>

>> This mic pre

>>

>> <http://www.johnhardyco.com/M-1details.html>

>>

>> is cleaner and more detailed than the Millenia IMO, and uses the

>> Jensen JT-16-B transformer:

>>

>> http://www.jensen-transformers.com/mic_in.html

>>

>> I have a handbuilt version of it I use on orchestras that is so clear

and

>> transparent that I have never heard anything as good in 20 years, and
>> yes it has input transformers. Deane Jensen's mission in life was to

>> take
>> the color out of transformers and make them more musical and he
>> succeeded. I asked him once how a transformer could make something
>> more clean and clear than without one. Seemed impossible to me.
>> He said that the problems the tranny solved are orders of magnitude worse
>>
>> than the ones that remain with a proper transformer.
>>
>> But we have found musical uses for the transformers that were colored
>> and "inferior". So it goes.
>>
>> Here is what Millennia say:
>>
>> Input Transformer Option
>> Millennia circuits are inherently
>> transformerless: it's the truest path
>> to the accuracy and realism we seek.
>> But on aggressive sources such as
>> drums and electric bass, we're also
>> fans of transformer-coupled inputs
>> such as Rupert Neve's original
>> Class-A, all-discrete designs from
>> the 1960s. Our custom MIT-01
>> transformer provides its own "fat,"
>> euphonic coloration, adding pleasing
>> distortion at high dynamic
>> levels and wide frequency excursions.
>> It may not be lifelike, but the
>> larger than life sound can really cut
>> through a mix.
>>
>>
>> Deane would run screaming from the room.. heh heh
>>
>> I still want one of those STT-1's though...
>>
>> How do you like the EQ?
>>
>> DC
>>
>
>

Subject: Re: tubes vs solid state vs transformers vs transformerless
Posted by [dc\[3\]](#) on Sat, 01 Dec 2007 10:08:11 GMT
[View Forum Message](#) <> [Reply to Message](#)

I wish. We finally got some rain today. Roof in the studio leaks..
I would love to see the Rockies right now.

We have 4 projects going at work... yikes...

DC

"DJ" <animix _ at _ animas _ dot _ net> wrote:

>Well.....now there's an excuse to come to Colorado if I ever heard one.

>

>;o)

>

>"DC" <dc@spammersinhell.com> wrote in message news:475106eb@linux...

>>

>> I wish you were nearby, I would love to punch my electric 6-string

>> in there with that EQ....

>>

>>

>> DC

>>

>>

>> "DJ" <animix _ at _ animas _ dot _ net> wrote:

>>>The EQ is a thing of beauty Don. Sweetness man.....major headroom when

>>>boosting. I like the EQ section in my Avalon 737 and use it a lot during

>>

>>>mixes in subtracive mode more than anything else. It just doesn't have
the

>>

>>>mojo when boosting that the SST's EQ seems to have so far in my testing.

>>>

>>>;o)

>>>

>>>"DC" <dc@spammersinhell.com> wrote in message news:475100d0\$1@linux...

>>>>

>>>> Good stuff man.

>>>>

>>>> Tubes also exhibit group delay (frequency bands moving around in time)

>>>> and this is a good thing or bad thing depending on the application.

>>>>

>>>> Also, transformers do not have to color things at all. The trannies

>>>> that

>>>> people are reproducing today are based upon ones that did, but it is
not

>>>> inherent in the technology.
>>>>
>>>> This mic pre
>>>>
>>>> <http://www.johnhardyco.com/M-1details.html>
>>>>
>>>> is cleaner and more detailed than the Millennia IMO, and uses the
>>>> Jensen JT-16-B transformer:
>>>>
>>>> http://www.jensen-transformers.com/mic_in.html
>>>>
>>>> I have a handbuilt version of it I use on orchestras that is so clear
>> and
>>>> transparent that I have never heard anything as good in 20 years, and
>>>> yes it has input transformers. Deane Jensen's mission in life was
to
>>
>>>> take
>>>> the color out of transformers and make them more musical and he
>>>> succeeded. I asked him once how a transformer could make something
>>>> more clean and clear than without one. Seemed impossible to me.
>>>> He said that the problems the tranny solved are orders of magnitude

>>>> worse
>>>>
>>>> than the ones that remain with a proper transformer.
>>>>
>>>> But we have found musical uses for the transformers that were colored
>>>> and "inferior". So it goes.
>>>>
>>>> Here is what Millennia say:
>>>>
>>>> Input Transformer Option
>>>> Millennia circuits are inherently
>>>> transformerless: it's the truest path
>>>> to the accuracy and realism we seek.
>>>> But on aggressive sources such as
>>>> drums and electric bass, we're also
>>>> fans of transformer-coupled inputs
>>>> such as Rupert Neve's original
>>>> Class-A, all-discrete designs from
>>>> the 1960s. Our custom MIT-01
>>>> transformer provides its own "fat,"
>>>> euphonic coloration, adding pleasing
>>>> distortion at high dynamic
>>>> levels and wide frequency excursions.
>>>> It may not be lifelike, but the
>>>> larger than life sound can really cut

>>>> through a mix.
>>>>
>>>>
>>>> Deane would run screaming from the room.. heh heh
>>>>
>>>> I still want one of those STT-1's though...
>>>>
>>>> How do you like the EQ?
>>>>
>>>> DC
>>>>
>>>
>>>
>>
>
>
