

# The main whole Question is:

**when will humans**

**avoid *hate***

**against themselves**

**and start**

**to conquer**

**the Universe ?**



in the meantime,

*You,*  
**lucky illuminated folks,**



*fellows of Faraday and Maxwell,*  
*Fleming and De Forest pupils,*  
*apprentices of Tesla and Alexanderson,*

**FASTEN**

**YOUR SEAT BELT**

I came in ***peace***

from the **SWITCHING TUBE VALLEY**

to land you  
in the ***amazing beach***  
of a ***forgiven*** and ***forbidden***  
***planet !***

**Enjoy !**

WELCOME !

STUDIO R.T.S. RAMPIN ING. MARCO - ITALY

proudly presents

*The Switchinglow Project*

*or how to bring the Amp Di Va technology  
over every DIYer's workbench*

@

the Burning Amp  
Ft. Mason, San Francisco, CA  
November 13<sup>th</sup>, 2016



[www.switchinglow.com](http://www.switchinglow.com)



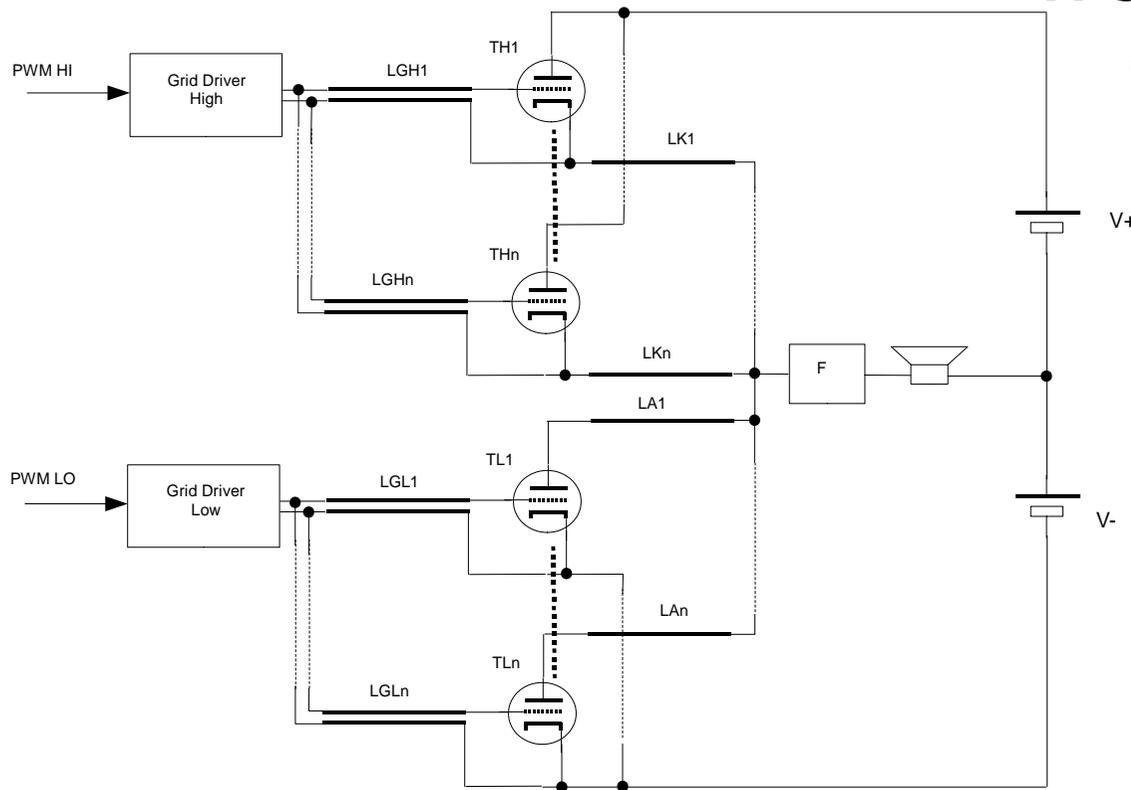
ONCE UPON A TIME...

One year ago,  
at the EMF Rome '15  
we depicted **how**

**to use triodes**  
**as power**  
**switching**  
**devices**

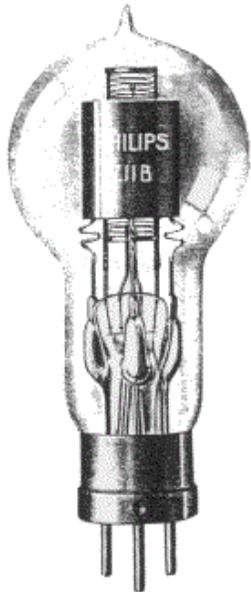
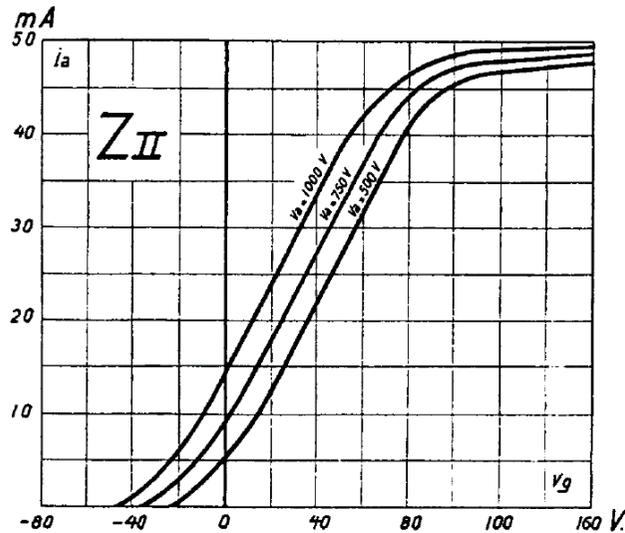
in the  
bridge  
arms

of classic  
Class-D amps



***AmpDiVa***  
***Half Bridge***  
***Basic Diagram***

# The *Amp Di Va* cookbook recipe to use a triode as a good electronic switch



- use *Floating Grid Drivers* to feed PWM streams to the bridge arms (grid reference is the cathode, but cathodes of different arms are not connected together !)
- use *negative grid pulses* to put the triode in off state
- use *positive grid pulses* to push the triode in on state this seems not allowed by modern tube d/s but it can be done, just limit the grid-cathode current (BTW: positive grid was "normal" until 1930 circa, then it **disappears**...keep it in mind for later...)
- use *several triodes connected in parallel* to obtain an higher on state plate current like in OTL
- use *Signal Integrity* to switch all the tubes at the same time

*By The Way...*

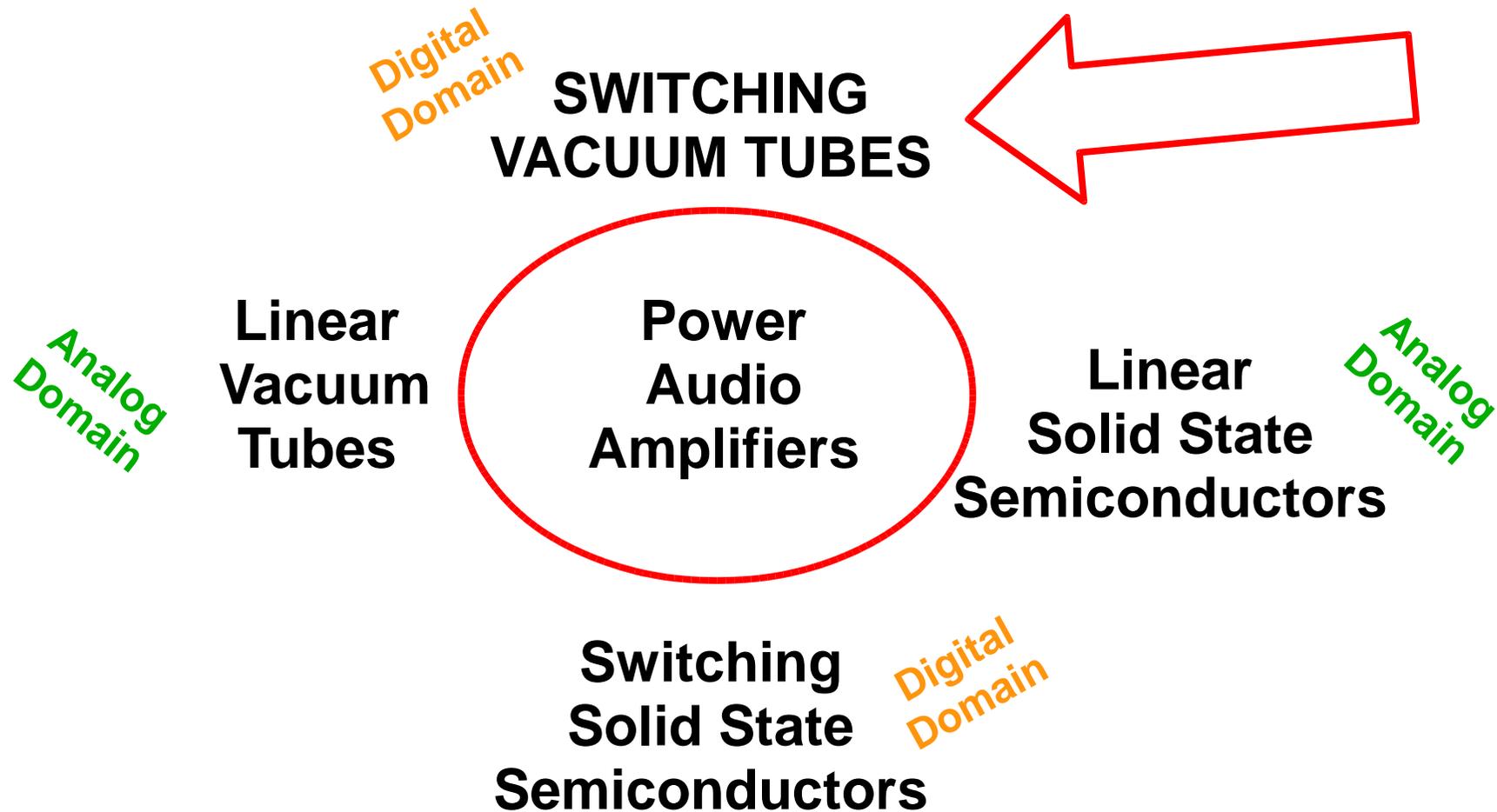
**the *Amp Di Va* Technology,**

-*Amplificatori Digitali Valvolari, transl. Digital Tube Amplifiers*-

**is FREE.**

**Everybody** can use the *Amp Di Va* term to refer to an ***amplifier made*** with a **full** or **half H-bridge**, where the ***switching power devices*** in the arms are **vacuum tubes** or **group of paralleled tubes**, and each arm has its own **Floating Grid Driver**, and every FGD provides ***negative*** and ***positive grid pulses***, and **Signal Integrity** can be used to assure **correct switching time**...this last is not mandatory but it's **funny**.

# *Amp Di Va* Tech...the missing cornerstone in the audio power amplifier design !



It's the unusual *fourth way* to design tube audio amp after the three most common well known ways to do

# This sounds really interesting !

Infact it:

- **allows a real full digital domain path through the vacuum tubes**

→ *That sounds good for digital native audio !*

- **allows the use of lower rail voltages**

→ *That is really DIYer friendly !*

- **allows the use of multiple series connected loudspeakers**

due to the constant current output behaviour

→ *That is very good for loudspeakers builders !*



...but it's also a **great challenge** for **EMC !**

Using the *AmpDiVa* Technology  
in *2015* we demonstrated the feasibility of  
*high end* customized amps...



... soon in **2017** we will try to  
define a new standard  
for **PRO...**



... but now, here at the **BA-16**,

we propose the

***Switchinglow Project***

***Evaluation Kit***

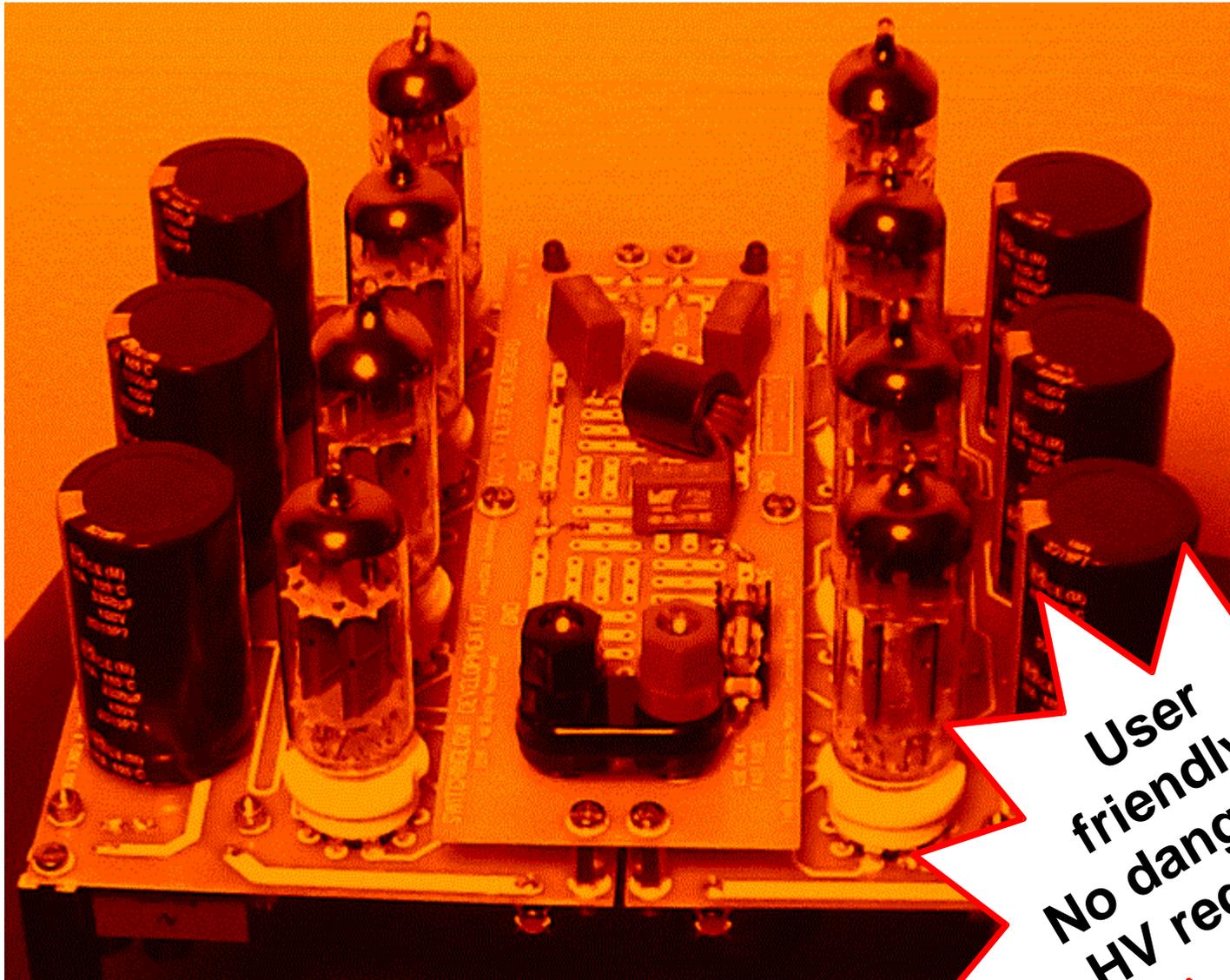
to bring the

*Amp Di Va* technology

**on every enthusiast**

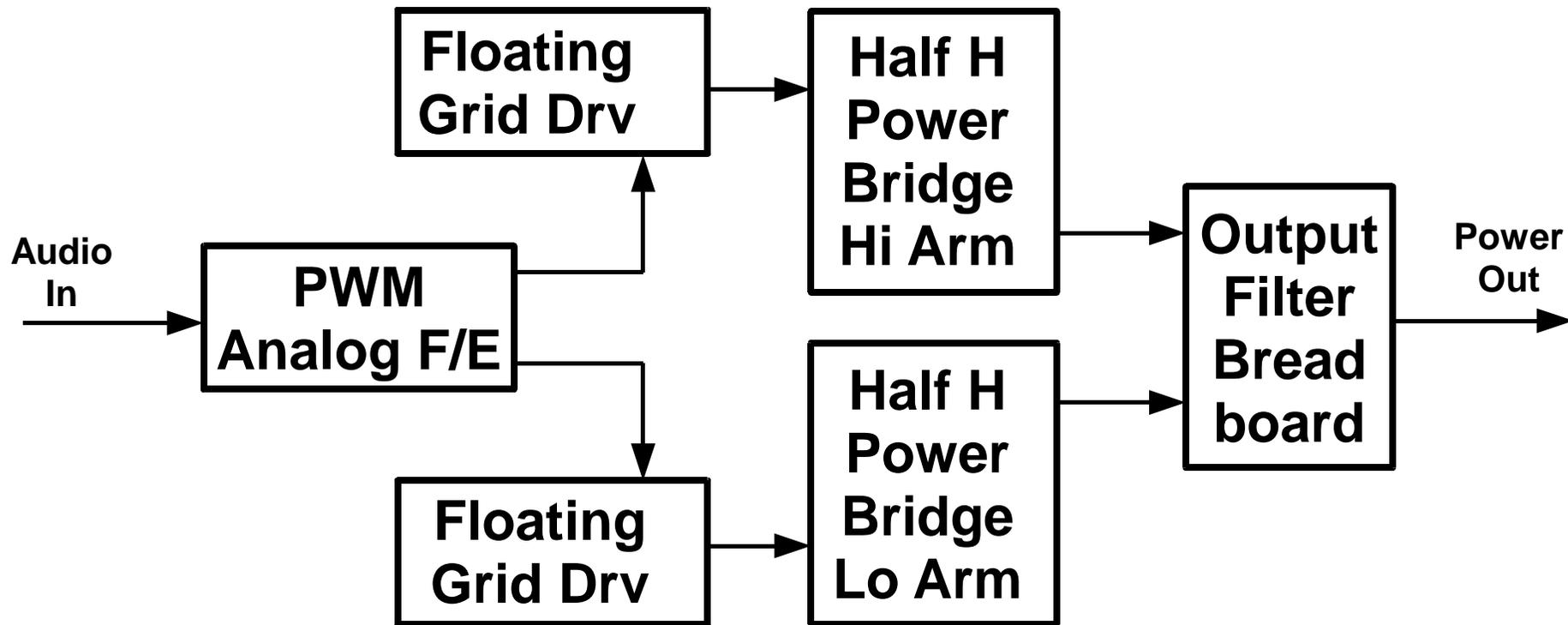
**audio DIYer's workbench**

...the ***Hottest Evaluation Kit*** for every  
serious audio **DIYer** !



**User  
friendly !  
No dangerous  
HV required !**

# ...the *SWITCHINGLOW Project* Evaluation & Development Platform



...just add a DC split power supply, the  
loudspeaker and your beloved music !

**...all you need to start !**



**Easy to assembly,  
all SMDs already soldered !**

# Sorry Sir, but why should I use it ?

- the *AmpDiVa* technology discloses an unusual, may be new, way to employ tubes in audio amplifiers
- it's like a new land, plenty of space to be explored, enabling new fields of research
- forget hybrids ! It opens the challenge for a true full digital audio path with the hottest sound of the tubes

**So, if you love tubes sound, or if you are a native digital with an ingenious vintage passion...**

***...enjoy  
the SWITCHINGLOW Project !***

***Thank you !***

....ops, please...wait a moment...  
there is a last pending question...

...what about the disappeared  
**Positive Grid Polarization ?**

Did you find any reason about it ?

OK folks, to tell the true I met an old **MIB...**  
he whispered that the PGP has been ***censured***  
after...

# ...THE PHILADELPHIA EXPERIMENT !





***...believe it***

***or not ! .....***