

# HOW TO REDUCE AUDIBLE NOISE

## Audible Frequency Range

It is said 20Hz to 20KHZ.

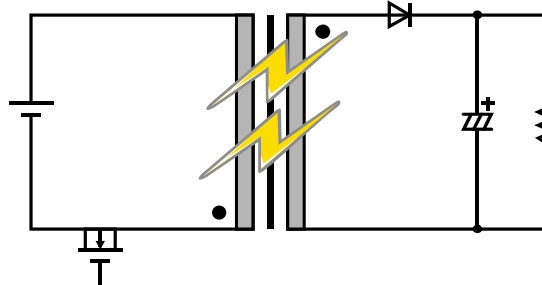
## Power Supply Switching Frequency VS Noise Generation

Efficiency is Key for high performance Power Supply. To achieve it, Switching method is being selected as for appropriate solution. The switching frequency is mostly like 30 to 150KHZ,

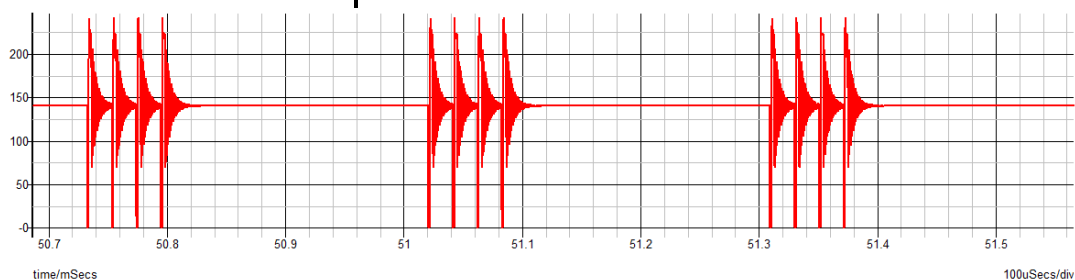
To improve efficiency more at low load, it is used to apply "burst mode" solution.

The Burst mode frequency is within the audible frequency band, Power Supply would generate audible noise at low load condition like Stand by mode, and it is needed to minimize. Mostly the roots of the audible noise was created by Switching Transformer.

And depends on that structure, the level of noise would be changed.



Burst Mode



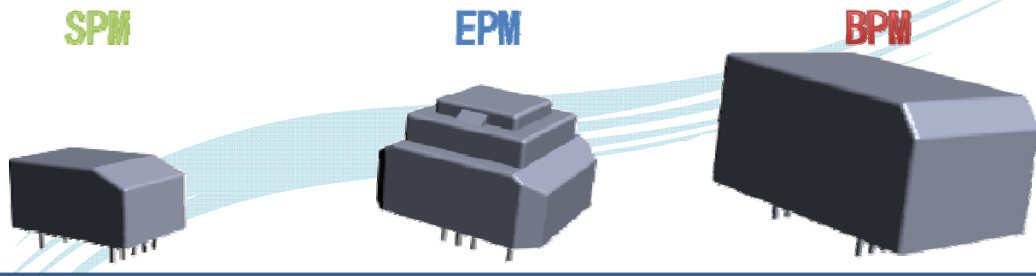
*Any solution there??*

Please check the answer on the other side!



Yes!  
We can!!

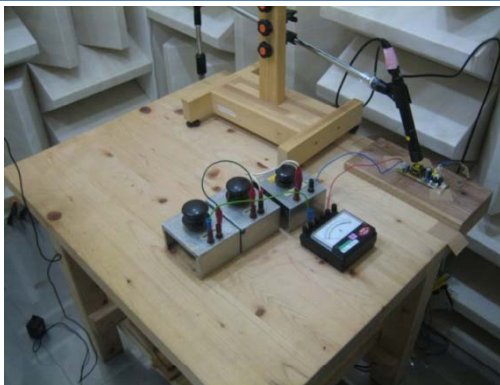
## Tamura Power Supply Module Series



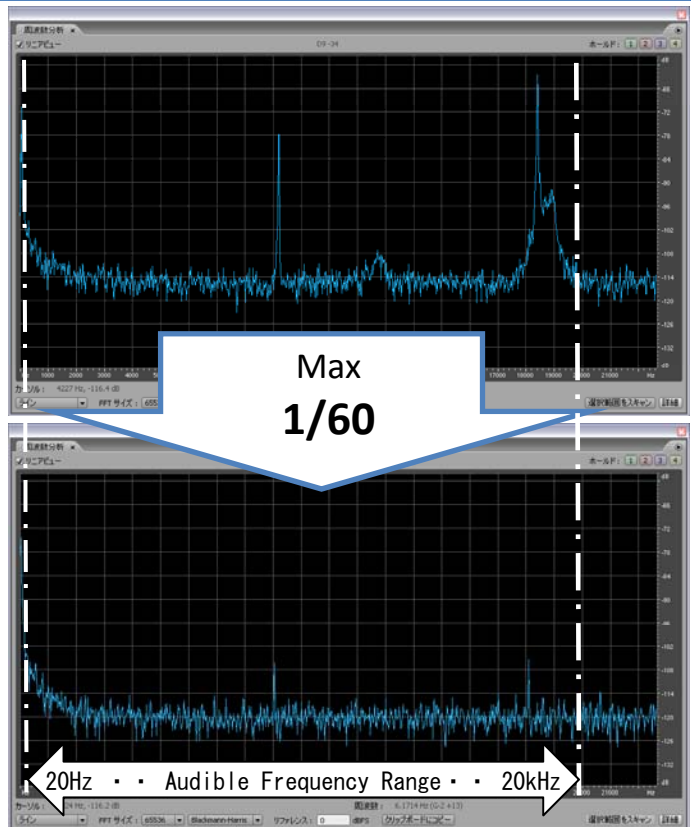
Tamura's power supply modules (EPM, SPM, and BPM Series) achieved by using Tamura Original designed structure. \* Patent applied for the structure  
Audible Noise is reduced to max 1/60  
(in comparison to Tamura's discrete power supply).

## Performance Comparison

TX of ordinal discrete power supply VS Transformer inside EPM at the burst mode



Tested in Tamura's soundproof room



(Comparison with Tamura's previous Power Module)