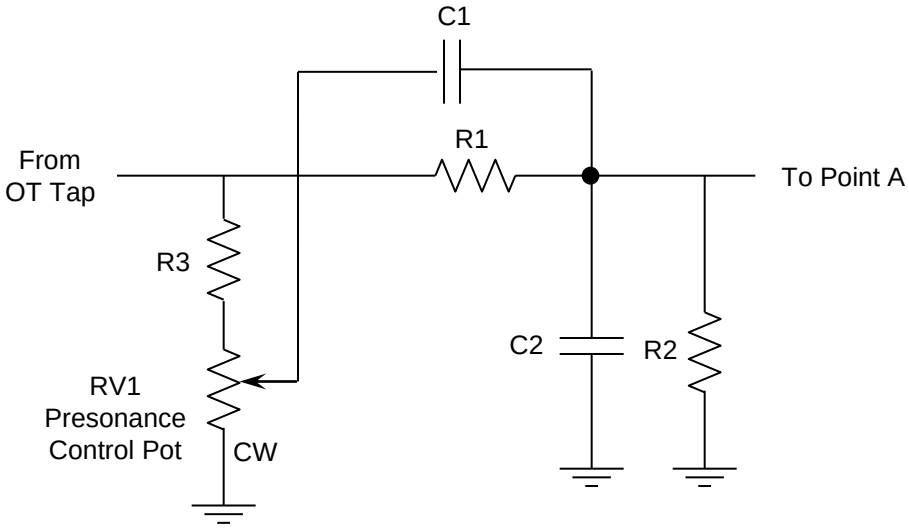
“Presonance” Control for NFB

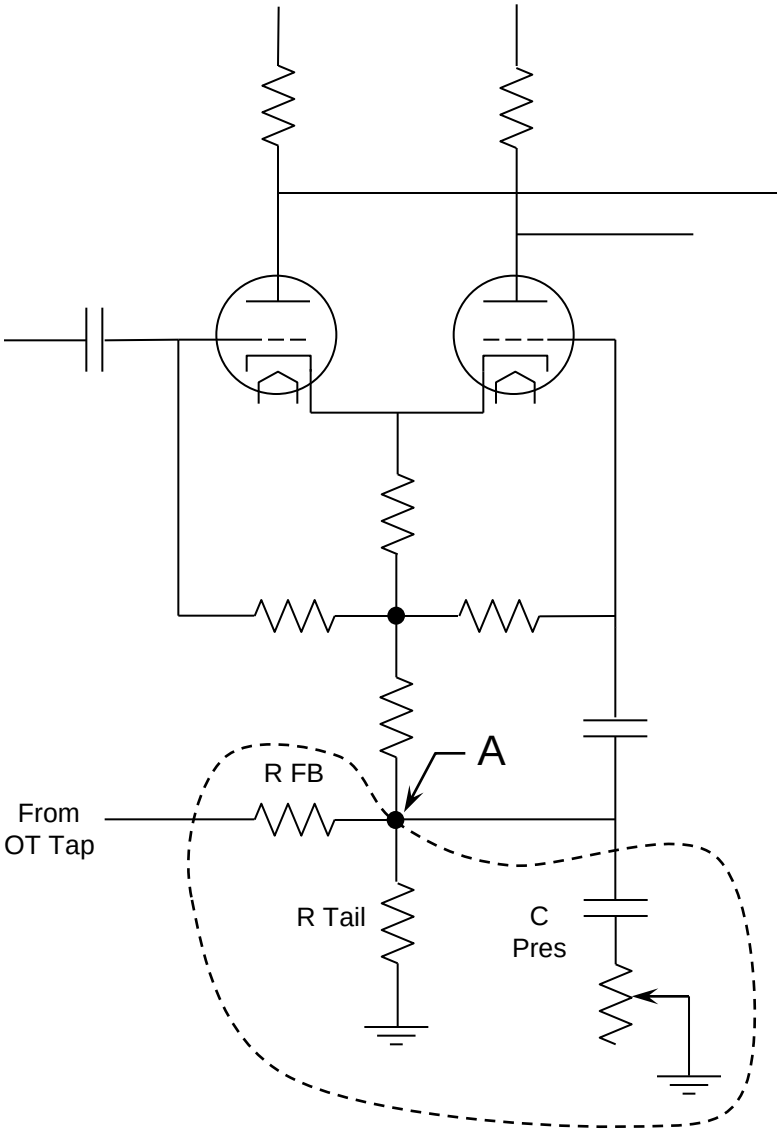
Martin P Manning January, 2012
Rev. 1, March 2012

Presonance control replaces existing FB and presence NW at right. Choosing component values as described replicates original “Presence” function (CW rotation from 50%) and adds “Resonance” function emphasizing bass (CCW rotation from 50%).



“Presonance” Control

R1 = R FB
R2 = R Tail
R3 = 2 * R Tail
C1 = C Pres *(1 – (R FB / R Tail) /40)
C2 = C Pres * (R FB / R Tail) /40
(with the intent that C1 + C2 = C Pres)
RV1 = 2* R Tail to 4 * R Tail , 10% Audio Taper



Typical Feedback and Presence Control on long-tailed pair phase inverter.

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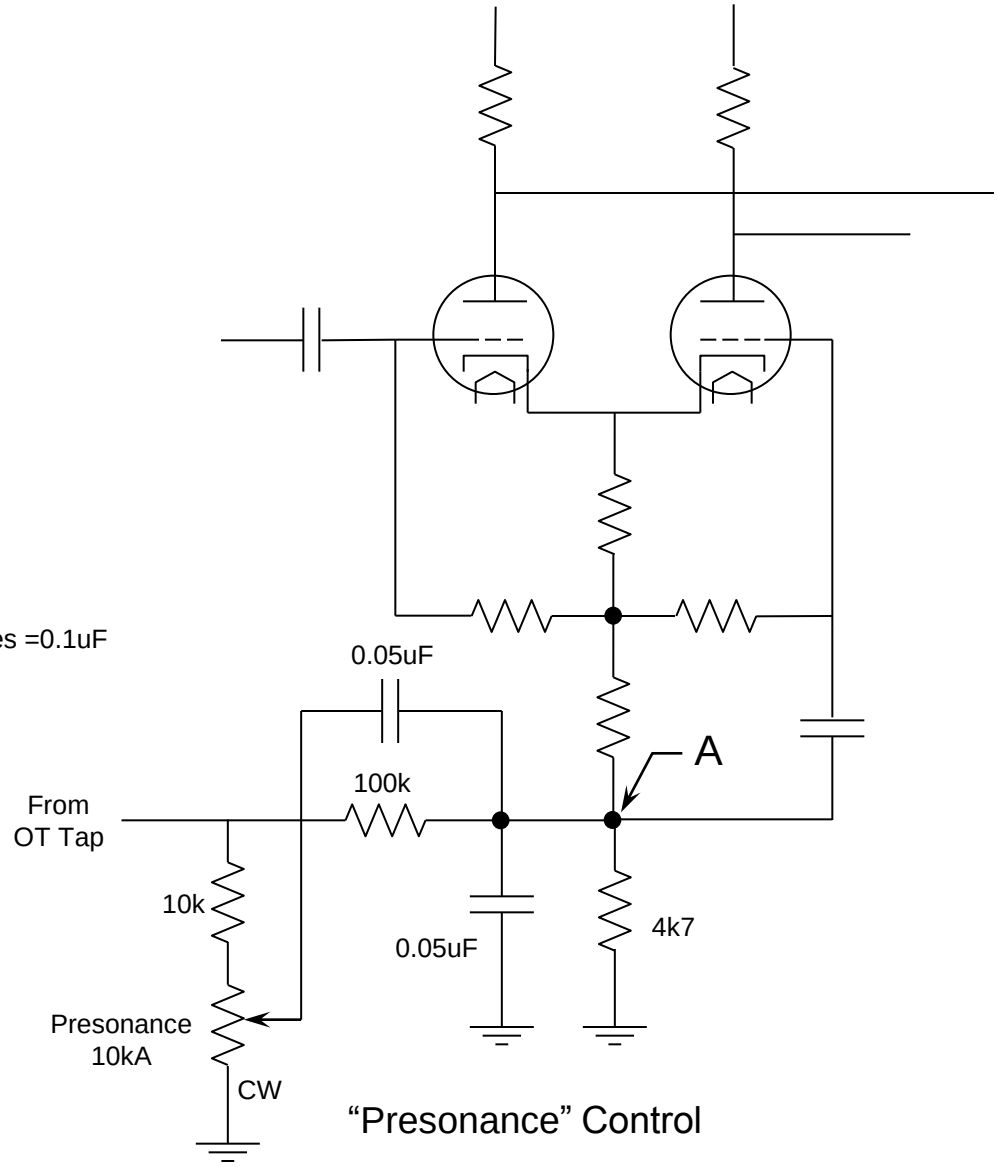
Example:
Original circuit R FB =100k, R Tail =4k7, and C Pres =0.1uF



“Presonance” Control