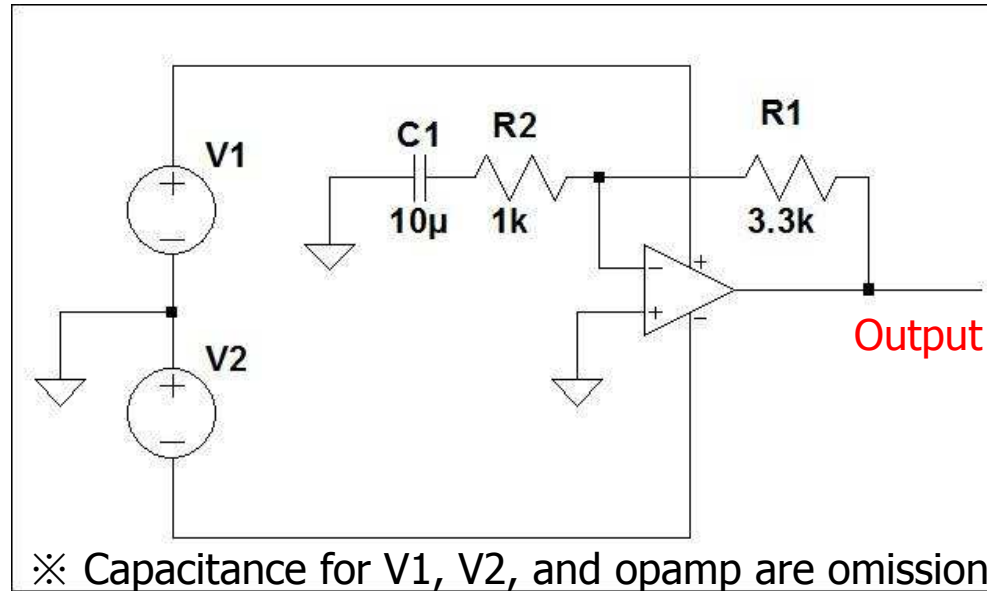


## <TL972 with audio application – Dual supply operation schematic>



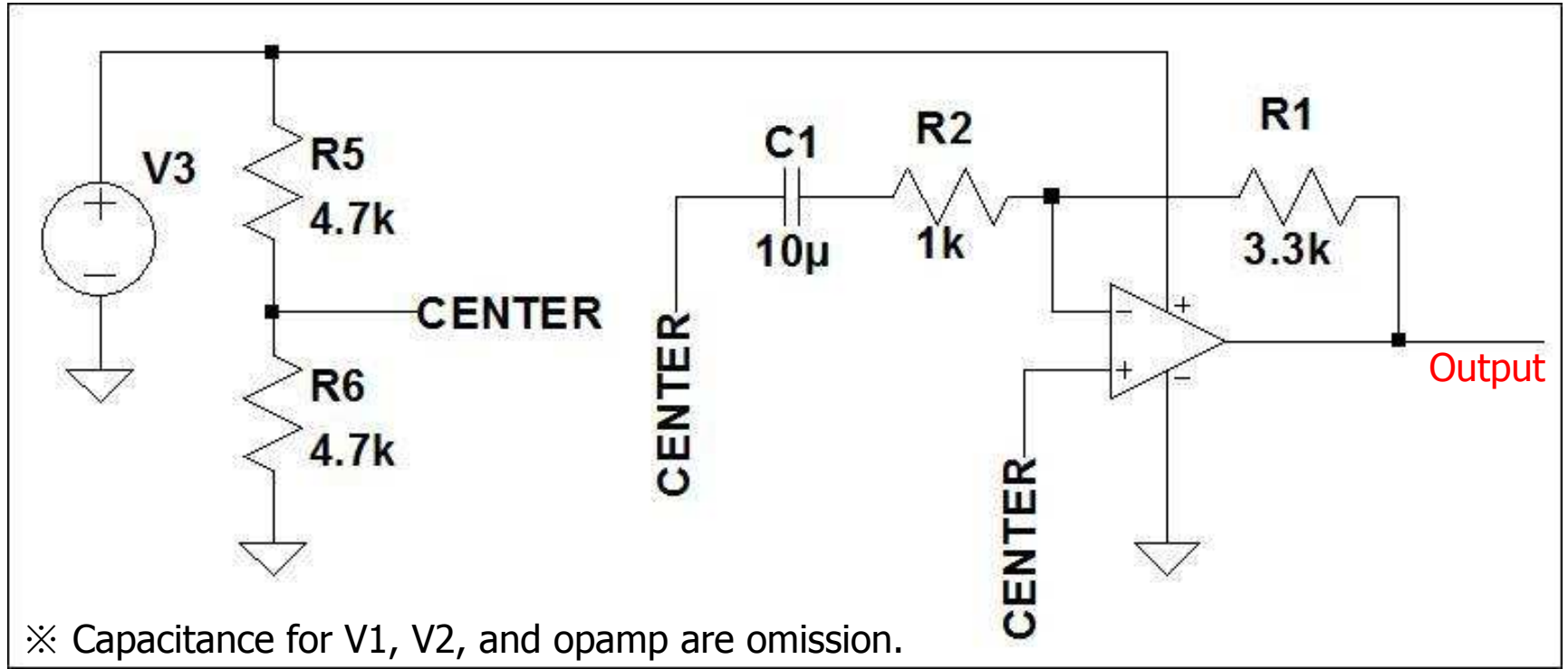
### <Condition>

- Power supply is stabilized power-supply. Voltage range :  $\pm 2V \sim \pm 5V$
- Opamp has some gain and connects to GND.
- "Output" connects to the mixer to gain 40dB, on the headphone, we can hear the noise.
  - These type noise are continuous sounds like as "patsu, patsu" and occasional sounds like as "pari, pari".
  - If R2 is 1kohm, there is noise also. For example R2=12kohm, it seems that there is no noise as customer's auditory.
  - In case of C1's short, there is noise also.
- The board layout is no problem. Bypass cap, feedback resistance and input resistance are the shortest route.
- On the same circuit, our customer replaced opamp to competitor device(NJM4580).As the result, there was no noise. (NJM4580's power supply is  $\pm 2V \sim \pm 5V$ )

### <Question>

When we use TL972, is it normal content which occurs noise? But we think TL972's spec is superior to NJM4580. If you have some advice, could you let us know?

# <TL972 with audio application - Single supply operation schematic>



## <Condition>

- Power supply is stabilized power-supply. Voltage range : 4V~10V
- "Output" connects to the mixer to gain 40dB, on the headphone, we can hear the noise also.
- On the same circuit, our customer replaced opamp to competitor device(NJM4580).As the result, there was no noise also.