PZT Tube Driver

Emulation of floating sources

If the desired driving voltage for each electrode is

- $U_{top,center} = 100\ \mathrm{V}\sin(\omega t)$
- $U_{bot,center} = -100\mathrm{V}\sin(\omega t) = -U_{top,center}$
- $U_{left,center} = 100\ \mathrm{V}\cos(\omega t)$
- $U_{right,center} = -100\ \mathrm{V}\cos(\omega t) = U_{left,center}$

Then the 3 independent, grounded sources should generate the following voltages:

- $U_{top} = 2U_{top,center} = 200\ \mathrm{V}\sin(\omega t)$
- $U_{bot} = 0$
- $U_{left} = U_{top,center} + U_{left,center} = \frac{\sqrt{2}}{2}100\ \mathrm{V}\sin(\omega t + 45°)$
- $U_{right} = U_{top,center} - U_{left,center} = \frac{\sqrt{2}}{2}100\ \mathrm{V}\sin(\omega t - 45°)$