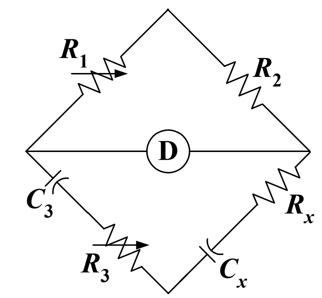
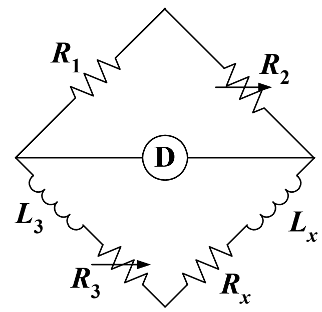
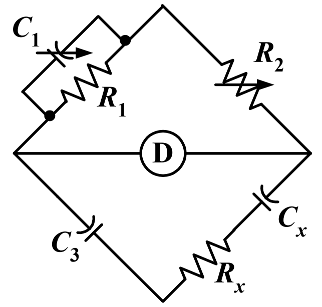
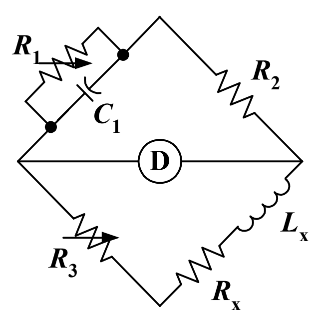
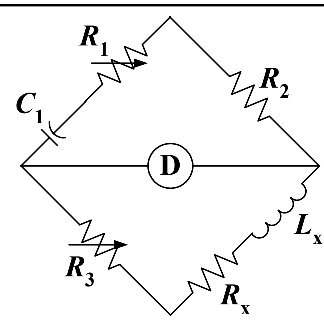
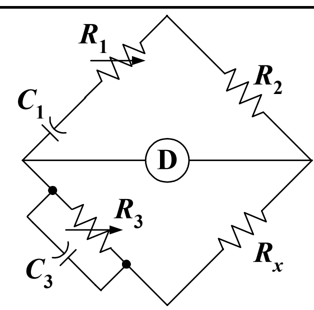
Series Capacitance Comparison Bridge Most common Capacitance bridge circuit. Usually R_3 and R_1 are variable so that bridge reads capacitance and D		$R_x = R_3 \frac{R_2}{R_1}$ $C_x = C_3 \frac{R_1}{R_2}$ $D = \omega R_3 C_3$
Series Inductance Comparison Bridge Basic inductance comparison bridge . Additional resistance added to inductor with lower Q to get resistance balance.		$R_x = R_3 \frac{R_2}{R_1}$ $L_x = L_3 \frac{R_2}{R_1}$ $Q = \frac{\omega L_3}{R_3}$
Scherring Bridge Used in high-voltage bridges with a high voltage capacitor as C_3. Used in high-frequency bridges because variable capacitors can be used for both adjustments. Use in dielectric measurements because C_1 gives high-resolution loss measurement.		$R_x = R_2 \frac{C_1}{C_3}$ $C_x = R_3 \frac{R_1}{R_2}$ $D = \omega R_1 C_1$
Maxwell-Wien Bridge Most common inductance bridge.		$R_x = \frac{R_2 R_3}{R_1}$ $L_x = R_2 R_3 C_1$ $Q = \omega R_1 C_1$
Hay Bridge Useful for parallel inductance measurements or high-Q measurements where R_3 of Maxwell bridge would have to be impractically high. Also used for measurements with dc current bias because all current applied across bridge flows in L_x		$R_x \approx \omega^2 C_1^2 R_1 R_2 R_3$ $L_x \approx R_2 R_3 C_1$ for $Q > 10$
Wien Bridge Useful for determine frequency of a voltage source		$\frac{R_2}{R_4} = \frac{R_1}{R_3} + \frac{C_3}{C_1}$ $f = \frac{1}{2\pi\sqrt{C_1 C_3 R_1 R_3}}$