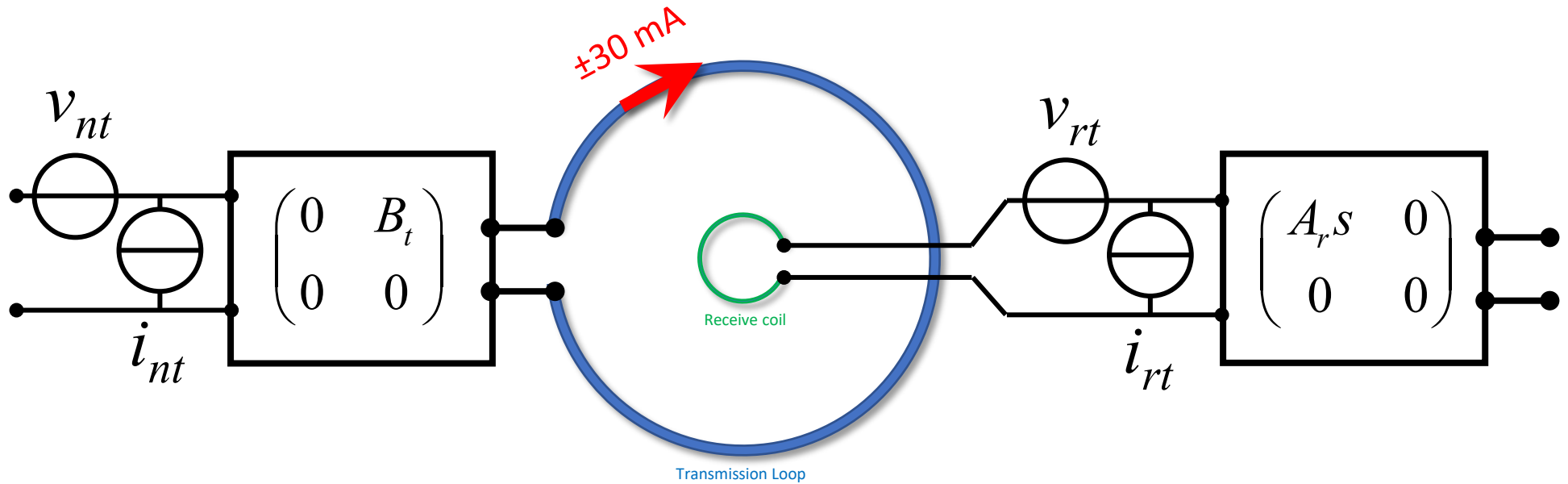


EE3C11 Team exercise 3

Consider a hearing loop system with an *instantaneous* transadmittance transmitter amplifier and an *integrating* voltage receiver amplifier. The transadmittance amplifier drives the transmit coil with maximally ± 30 mA.



1. Determine the requirement for the voltage-drive capability of the transmitter amplifier.
2. Determine the required gain of the transmitter amplifier.
3. Determine a show-stopper value for the equivalent-input voltage noise spectral density of the transmitter amplifier (assume white noise).
4. Determine the required gain of the receiver amplifier.
5. Determine a show-stopper value for the equivalent-input voltage noise spectral density of the receiver amplifier (assume white noise).
6. Determine a show-stopper value for the equivalent-input current noise spectral density of the receiver amplifier (assume white noise).