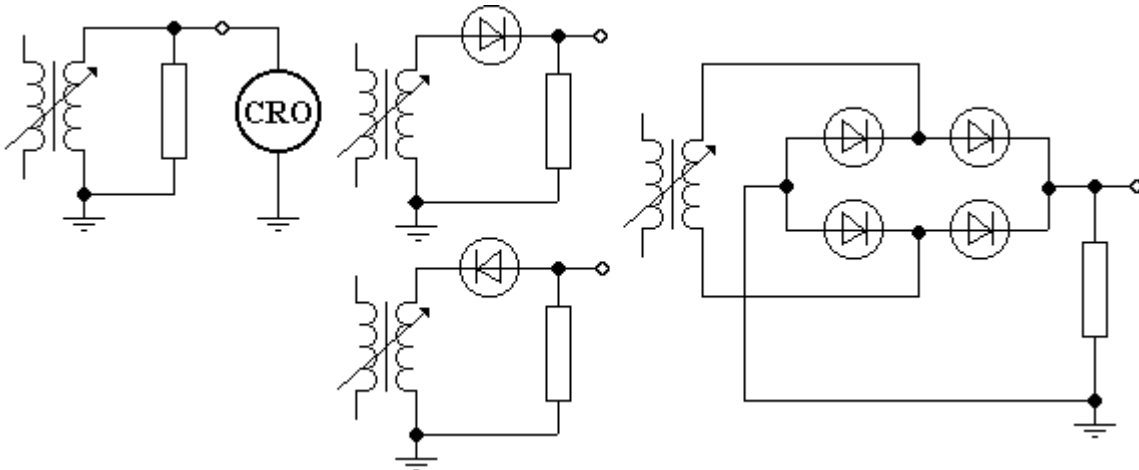
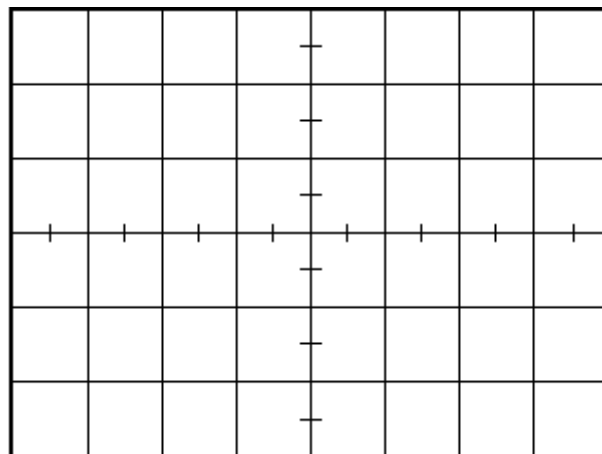


Different types of rectifier



1. The circuit at the left-hand end shows a variable transformer (a.c. power pack) supplying current to a 1 kΩ resistor. An oscilloscope (CRO) is connected to the output terminal. Notice that one terminal of the transformer has been earthed. Construct the circuit.
2. Set up the CRO so that its vertical amplifier is 2 V/cm and the timebase is 5 ms/cm. Adjust the Y-shift so that the trace is in the centre of the screen for 0 V. Don't adjust these settings from now on. You should only need to alter the trigger setting to stabilise the trace.
3. Adjust the transformer until the peak voltage on the CRO screen is +5 V. Don't adjust the transformer from now on.
4. Sketch the trace on the screen. A copy of the grid below might help. Don't forget to show the settings of the timebase and vertical amplifier.



5. Assemble the remaining circuits in turn. Use 1 kΩ resistors each time. For each circuit, use the CRO to sketch the the time variation of the voltage at the output terminal. Note the different earthing arrangements for the diode bridge circuit!