

A U T O M A T I C G A I N C O N T R O L

NOTE: Attach all calculations

PART 1 AGC with passive peak detector

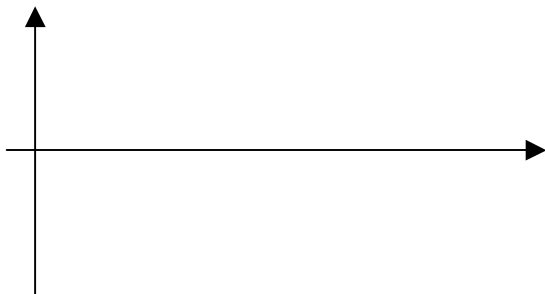
Pre-lab

- 1. Amplitude of V_{o1} = _____
- 2. V_{Y1} min = _____ V_{Y1} max = _____
- 3. Range of V_{in} = from _____ to _____

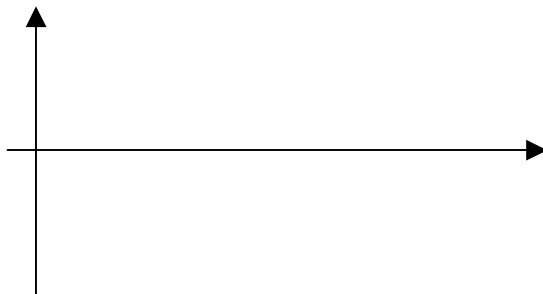
Why does not the AGC work outside this above-calculated range?

- 4. $V_w(\text{peak})$ = _____
- 5. $\Delta V_{\text{det}}(\text{pp})$ = _____ $\Delta V_{Y1}(\text{pp})$ = _____ at 1 kHz
- $\Delta V_{\text{det}}(\text{pp})$ = _____ $\Delta V_{Y1}(\text{pp})$ = _____ at 10 kHz

Peak detector ripple waveform
Label DC and AC components



V_{Y1} ripple waveform
Label DC and AC components



PART 2 AGC with active peak detector

NOTE: Attach all calculations

Pre-lab

1. Amplitude of V_{o1} = _____
2. V_{Y1} min = _____ V_{Y1} max = _____
3. Range of V_{in} = from _____ to _____

Why does not the AGC work outside this above-calculated range?

4. $V_w(\text{peak})$ = _____
5. $\Delta V_{\text{det}}(\text{pp})$ = _____ $\Delta V_{Y1}(\text{pp})$ = _____ at 1 kHz
 $\Delta V_{\text{det}}(\text{pp})$ = _____ $\Delta V_{Y1}(\text{pp})$ = _____ at 10 kHz

Peak detector ripple waveform
Label DC and AC components



V_{Y1} ripple waveform
Label DC and AC components

