Lab 8: The RC Filter

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Table 1: High-Pass Filter								
f_{gen}	f_{osc}	C	R	V_{RC}	V_R	$V/DIV\ for\ V_R$	$\|H_{exp}\|$	$\|H_{the}\|$
10kHz		$0.22\mu F$	100Ω			1V		
5kHz		$0.22\mu F$	100Ω			1V		
2kHz		$0.22\mu F$	100Ω			1V		
1kHz		$0.22\mu F$	100Ω			1V		
15kHz		$0.22\mu F$	100Ω			1V		
20kHz		$0.22\mu F$	100Ω			1V		
30kHz		$0.22\mu F$	100Ω			1V		
40kHz		$0.22\mu F$	100Ω			1V		

High-Pass Filter Setup

Table 2: Low-Pass Filter								
f_{gen}	f_{osc}	C	R	V_{RC}	V_C	$V/DIV\ for\ V_C$	$\|H_{exp}\|$	$\|H_{the}\|$
10kHz		$0.22\mu F$	100Ω			1V		
5kHz		$0.22\mu F$	100Ω			1V		
2kHz		$0.22\mu F$	100Ω			1V		
1kHz		$0.22\mu F$	100Ω			1V		
15kHz		$0.22\mu F$	100Ω			1V		
20kHz		$0.22\mu F$	100Ω			1V		
30kHz		$0.22\mu F$	100Ω			1V		
40kHz		$0.22\mu F$	100Ω			1V		

Low-Pass Filter Setup

1. Compare the theoretically obtained curves with the experimentally determined curves and quantify any difference. What do you think this difference is due to?

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