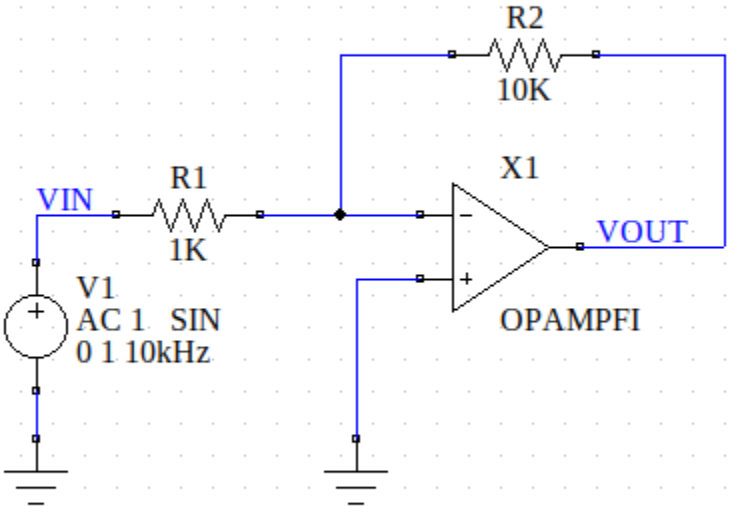
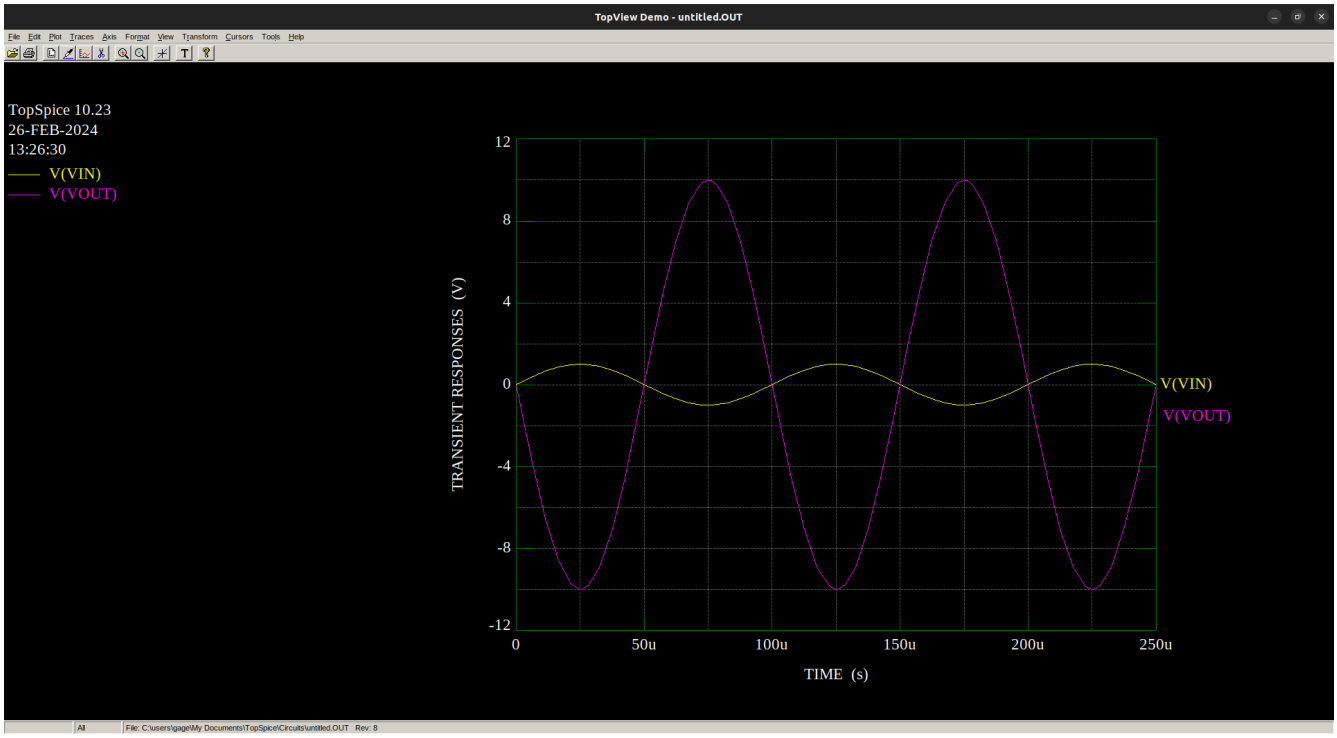
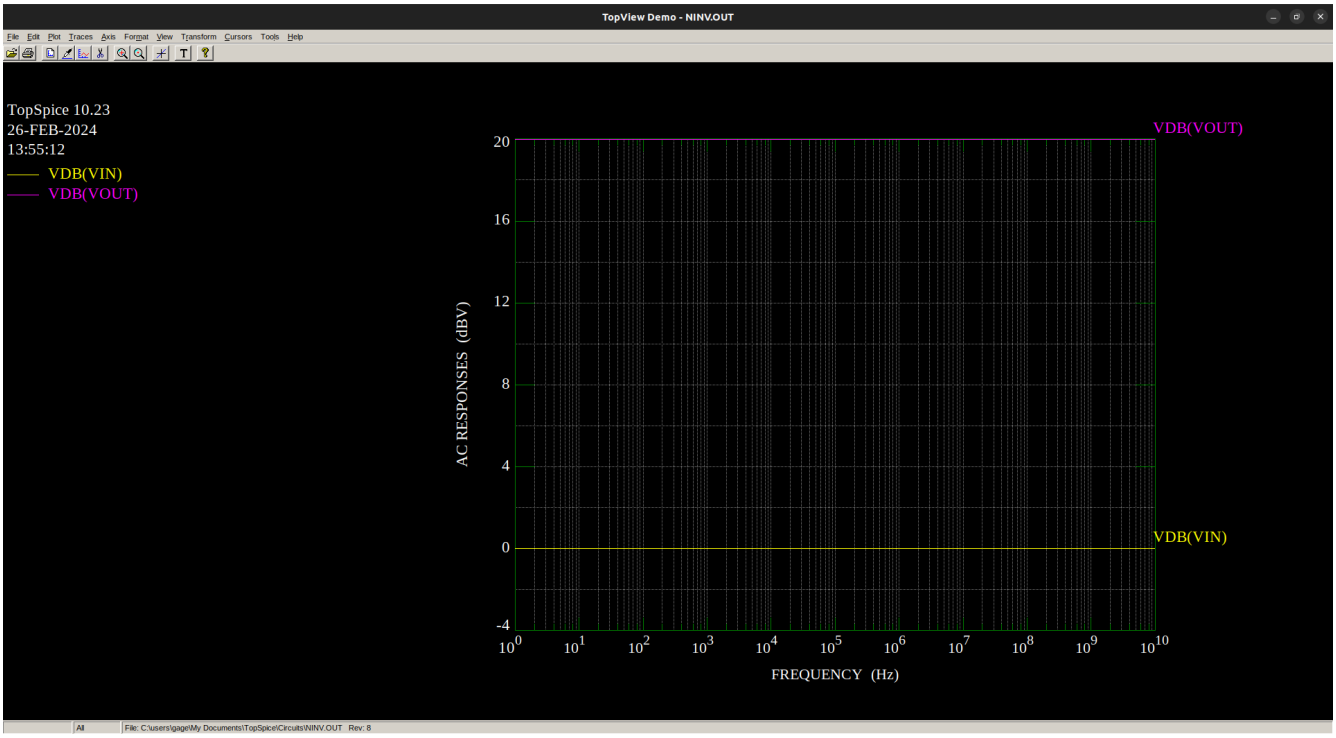
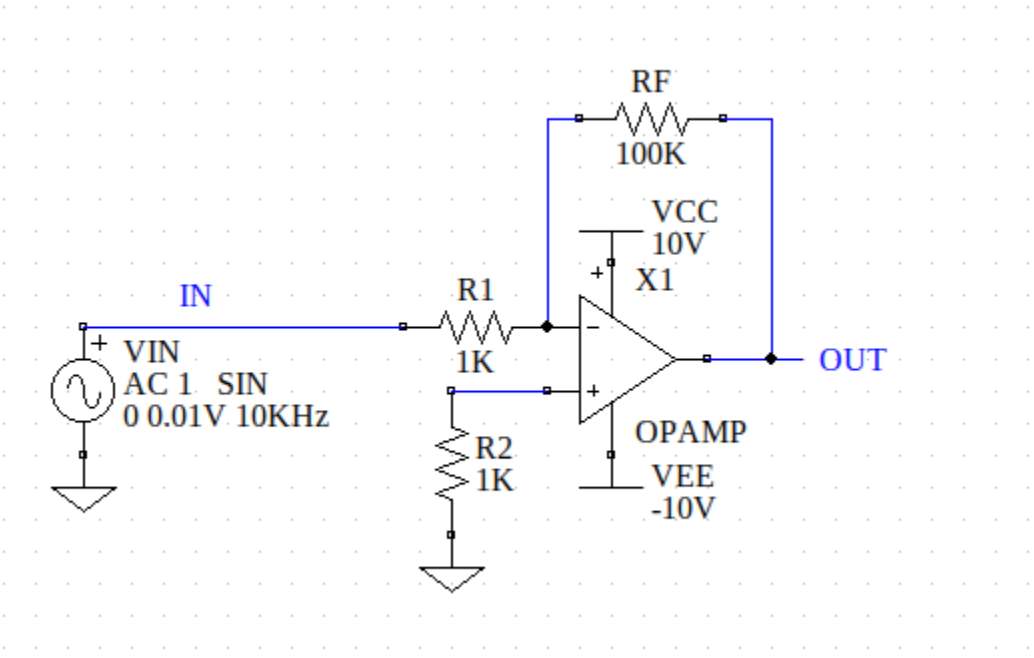
Example 2

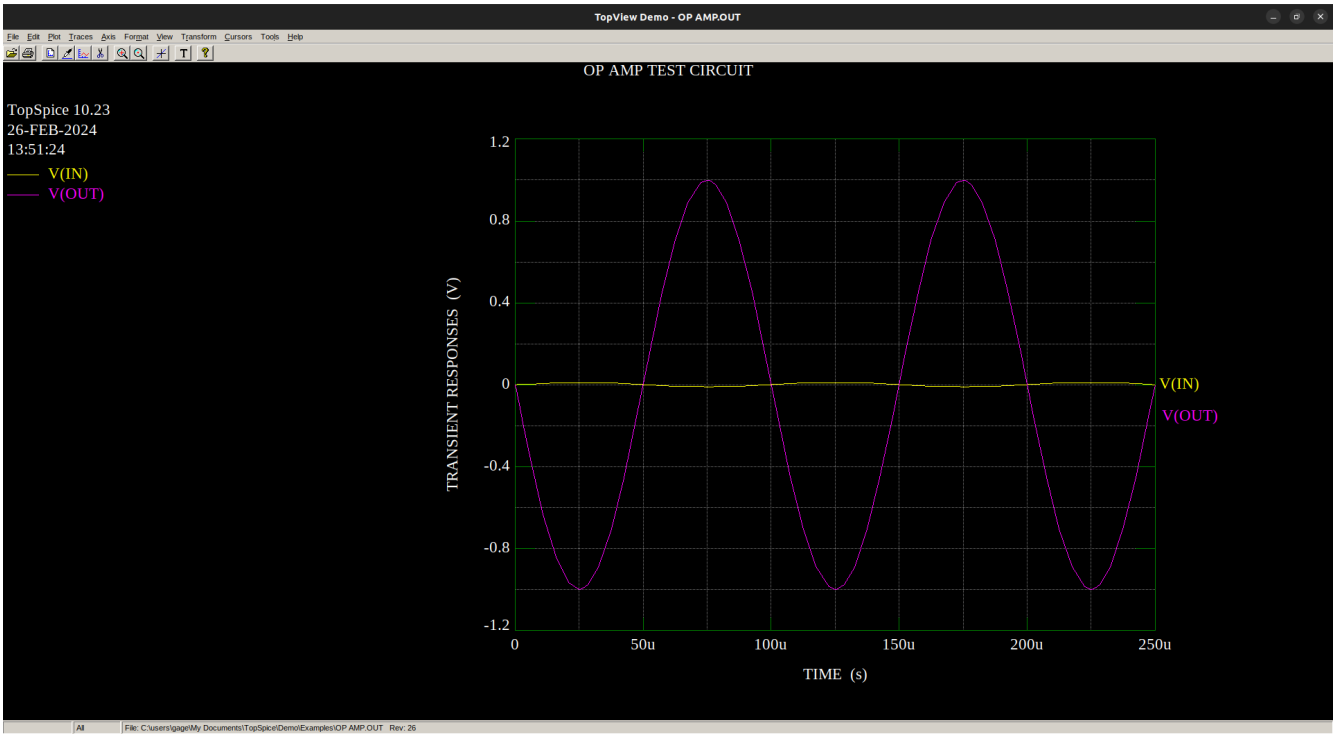

R2
10K
X1
VIN
R1
1K
VOUT
V1
AC 1 SIN
0 1 10kHz
OPAMPFI

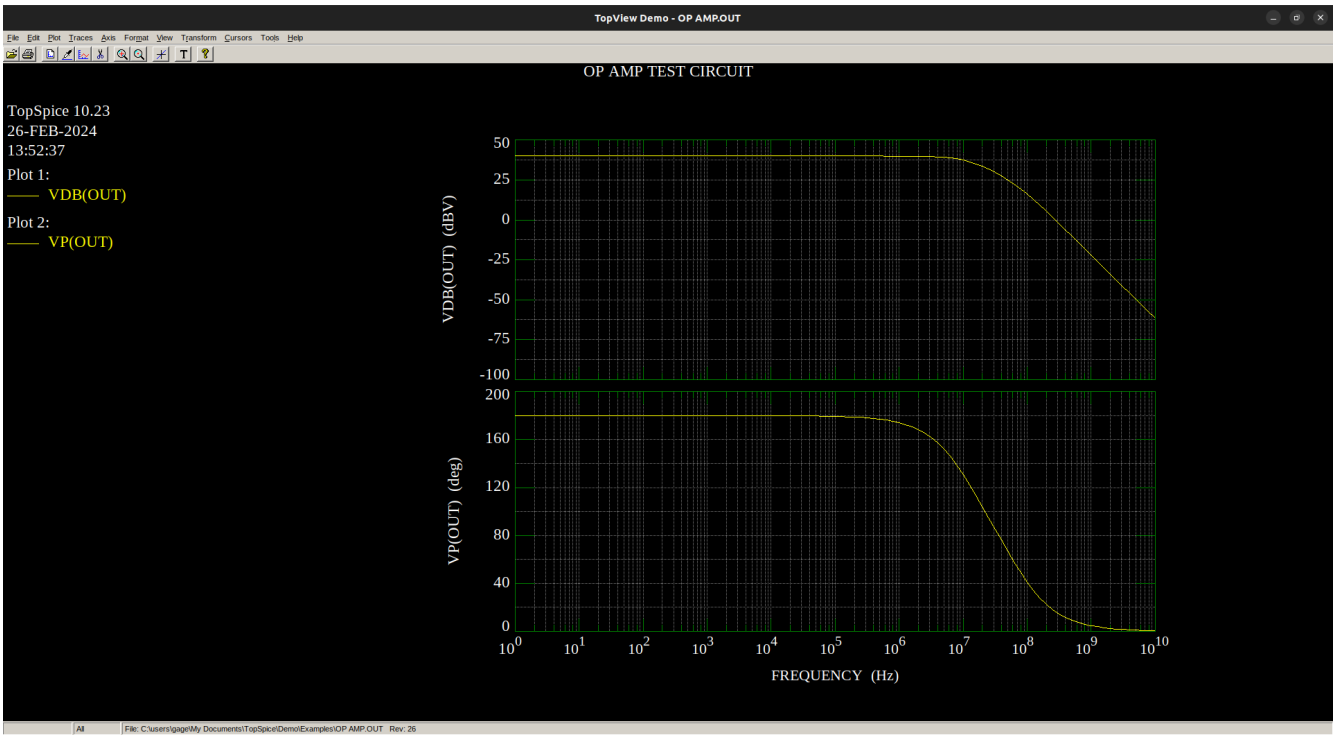

TopView Demo - untitled.OUT
File Edit Plot Traces Axis Format View Transform Cursors Tools Help
TopSpice 10.23
26-FEB-2024
13:26:30
V(VIN)
V(VOUT)
TRANSIENT RESPONSES (V)
12
8
4
0
-4
-8
-12
0
50u
100u
150u
200u
250u
TIME (s)
V(VIN)
V(VOUT)

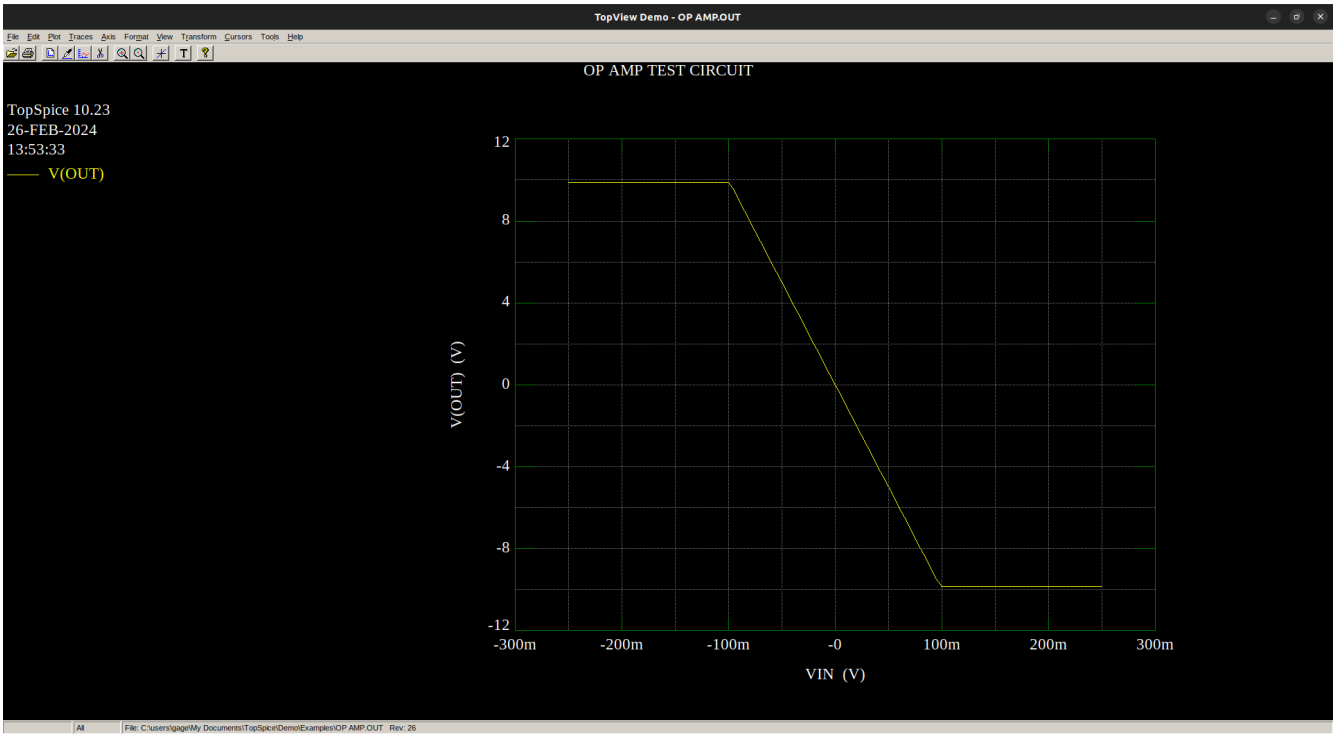

TopView Demo - NINV.OUT
File Edit Plot Traces Axis Format View Transform Cursors Tools Help
TopSpice 10.23
26-FEB-2024
13:55:12
VDB(VIN)
VDB(VOUT)
VDB(VOUT)
VDB(VIN)
AC RESPONSES (dBV)
20
16
12
8
4
0
-4
10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7 10^8 10^9 10^{10}
FREQUENCY (Hz)
All
File: C:\users\gage\My Documents\TopSpice\Circuits\NINV.OUT Rev: 8

Example 3


RF
100K
VCC
10V
X1
IN
R1
1K
VIN
AC 1 SIN
0 0.01V 10KHz
OUT
OPAMP
R2
1K
VEE
-10V


TopView Demo - OP AMP.OUT
File Edit Plot Traces Axis Format View Transform Cursors Tools Help
OP AMP TEST CIRCUIT
TopSpice 10.23
26-FEB-2024
13:51:24
V(IN)
V(OUT)
TRANSIENT RESPONSES (V)
1.2
0.8
0.4
0
-0.4
-0.8
-1.2
0
50u
100u
150u
200u
250u
TIME (s)
V(IN)
V(OUT)
All
File: C:\users\gage\My Documents\TopSpice\Demo\Examples\OP AMP.OUT Rev: 26


TopView Demo - OP AMP.OUT
File Edit Plot Traces Axis Format View Transform Cursors Tools Help
OP AMP TEST CIRCUIT
TopSpice 10.23
26-FEB-2024
13:52:37
Plot 1:
VDB(OUT)
Plot 2:
VP(OUT)
VDB(OUT) (dBV)
50
25
0
-25
-50
-75
-100
VP(OUT) (deg)
200
160
120
80
40
0
10^0
10^1
10^2
10^3
10^4
10^5
10^6
10^7
10^8
10^9
10^10
FREQUENCY (Hz)
All
File: C:\users\gage\My Documents\TopSpice\Demo\Examples\OP AMP.OUT Rev: 26



List of things:

R1) YAGEO 1kΩ Resistor - $0.10
R2) YAGEO 1kΩ Resistor - $0.10
RF) YAGEO 100kΩ Resistor - $0.09
Op-Amp) Texas Instruments LMV358IPWR - $0.42
Voltage Source) AliExpress “AC-DC AC 100V-240V to DC 5V 12V 1A 2A 2.5A Switching Power Supply Module Switch Overvoltage Overcurrent Short Circuit Protection” - $0.58

Total - $1.29, but I have zero faith in the voltage source