

Circuit: * C:\Users\Acer\SIM\last\guitar amp-mod-2.asc

Direct Newton iteration for .op point succeeded.

.step res=10000

N-Period=1

Fourier components of V(out)

DC component:0.000165831

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	1.233e+00	1.000e+00	-0.41°
2	2.000e+03	8.668e-03	7.030e-03	-91.71°
3	3.000e+03	2.684e-05	2.177e-05	-177.80°
4	4.000e+03	1.182e-05	9.583e-06	35.59°
5	5.000e+03	7.430e-06	6.026e-06	-0.15°
6	6.000e+03	6.119e-06	4.963e-06	-0.21°
7	7.000e+03	5.246e-06	4.255e-06	-0.11°
8	8.000e+03	4.590e-06	3.723e-06	-0.08°
9	9.000e+03	4.080e-06	3.309e-06	-0.08°

Total Harmonic Distortion: 0.703020%(0.703020%)

N-Period=1

Fourier components of V(out1)

DC component:-0.00834904

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	7.260e+00	1.000e+00	-0.26°
2	2.000e+03	4.978e-03	6.857e-04	-89.53°
3	3.000e+03	2.253e-04	3.104e-05	177.77°
4	4.000e+03	1.773e-05	2.443e-06	166.47°
5	5.000e+03	1.366e-05	1.882e-06	179.99°
6	6.000e+03	1.156e-05	1.592e-06	179.97°
7	7.000e+03	9.907e-06	1.365e-06	179.97°
8	8.000e+03	8.669e-06	1.194e-06	179.97°
9	9.000e+03	7.705e-06	1.061e-06	179.97°

Total Harmonic Distortion: 0.068641%(0.068640%)

N-Period=1

Fourier components of V(out)

DC component:0.000165831

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	1.233e+00	1.000e+00	-0.41°
2	2.000e+03	8.668e-03	7.030e-03	-91.71°
3	3.000e+03	2.684e-05	2.177e-05	-177.80°
4	4.000e+03	1.182e-05	9.583e-06	35.59°
5	5.000e+03	7.430e-06	6.026e-06	-0.15°
6	6.000e+03	6.119e-06	4.963e-06	-0.21°
7	7.000e+03	5.246e-06	4.255e-06	-0.11°
8	8.000e+03	4.590e-06	3.723e-06	-0.08°
9	9.000e+03	4.080e-06	3.309e-06	-0.08°

Total Harmonic Distortion: 0.703020%(0.703020%)

.step res=15000

N-Period=1

Fourier components of V(out)

DC component:0.000858616

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	1.388e+00	1.000e+00	-0.46°
2	2.000e+03	1.062e-02	7.650e-03	-91.73°
3	3.000e+03	3.466e-05	2.497e-05	-177.33°
4	4.000e+03	1.600e-05	1.153e-05	41.16°
5	5.000e+03	9.227e-06	6.647e-06	-0.12°
6	6.000e+03	7.580e-06	5.460e-06	-0.23°
7	7.000e+03	6.498e-06	4.681e-06	-0.09°
8	8.000e+03	5.686e-06	4.096e-06	-0.07°
9	9.000e+03	5.055e-06	3.641e-06	-0.07°

Total Harmonic Distortion: 0.765053%(0.765054%)

N-Period=1
Fourier components of V(out1)
DC component:-0.0116914

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	8.175e+00	1.000e+00	-0.31°
2	2.000e+03	4.107e-03	5.024e-04	-87.69°
3	3.000e+03	3.161e-04	3.866e-05	177.34°
4	4.000e+03	2.370e-05	2.900e-06	171.69°
5	5.000e+03	1.839e-05	2.250e-06	-179.98°
6	6.000e+03	1.560e-05	1.908e-06	179.97°
7	7.000e+03	1.337e-05	1.635e-06	179.98°
8	8.000e+03	1.170e-05	1.431e-06	179.98°
9	9.000e+03	1.040e-05	1.272e-06	179.98°

Total Harmonic Distortion: 0.050392%(0.050391%)

N-Period=1
Fourier components of V(out)
DC component:0.000858616

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	1.388e+00	1.000e+00	-0.46°
2	2.000e+03	1.062e-02	7.650e-03	-91.73°
3	3.000e+03	3.466e-05	2.497e-05	-177.33°
4	4.000e+03	1.600e-05	1.153e-05	41.16°
5	5.000e+03	9.227e-06	6.647e-06	-0.12°
6	6.000e+03	7.580e-06	5.460e-06	-0.23°
7	7.000e+03	6.498e-06	4.681e-06	-0.09°
8	8.000e+03	5.686e-06	4.096e-06	-0.07°
9	9.000e+03	5.055e-06	3.641e-06	-0.07°

Total Harmonic Distortion: 0.765053%(0.765054%)

.step res=20000
N-Period=1
Fourier components of V(out)
DC component:0.00179959

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	1.565e+00	1.000e+00	-0.51°
2	2.000e+03	1.302e-02	8.320e-03	-91.74°
3	3.000e+03	4.534e-05	2.897e-05	-176.92°
4	4.000e+03	2.215e-05	1.415e-05	47.21°
5	5.000e+03	1.137e-05	7.265e-06	-0.07°
6	6.000e+03	9.310e-06	5.949e-06	-0.29°
7	7.000e+03	7.982e-06	5.101e-06	-0.06°
8	8.000e+03	6.985e-06	4.463e-06	-0.05°
9	9.000e+03	6.209e-06	3.968e-06	-0.05°

Total Harmonic Distortion: 0.831965%(0.831965%)

N-Period=1

Fourier components of V(out1)

DC component:-0.0163316

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	9.216e+00	1.000e+00	-0.36°
2	2.000e+03	2.368e-03	2.569e-04	-80.61°
3	3.000e+03	4.531e-04	4.917e-05	176.81°
4	4.000e+03	3.250e-05	3.527e-06	178.93°
5	5.000e+03	2.504e-05	2.717e-06	-179.92°
6	6.000e+03	2.131e-05	2.312e-06	179.96°
7	7.000e+03	1.827e-05	1.982e-06	179.99°
8	8.000e+03	1.598e-05	1.734e-06	179.99°
9	9.000e+03	1.421e-05	1.541e-06	179.99°

Total Harmonic Distortion: 0.026167%(0.026167%)

N-Period=1

Fourier components of V(out)

DC component:0.00179959

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	1.565e+00	1.000e+00	-0.51°
2	2.000e+03	1.302e-02	8.320e-03	-91.74°
3	3.000e+03	4.534e-05	2.897e-05	-176.92°
4	4.000e+03	2.215e-05	1.415e-05	47.21°
5	5.000e+03	1.137e-05	7.265e-06	-0.07°
6	6.000e+03	9.310e-06	5.949e-06	-0.29°
7	7.000e+03	7.982e-06	5.101e-06	-0.06°
8	8.000e+03	6.985e-06	4.463e-06	-0.05°
9	9.000e+03	6.209e-06	3.968e-06	-0.05°

Total Harmonic Distortion: 0.831965%(0.831965%)

.step res=30000

N-Period=1

Fourier components of V(out)

DC component:0.00472358

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	2.004e+00	1.000e+00	-0.65°
2	2.000e+03	1.966e-02	9.811e-03	-91.72°
3	3.000e+03	8.215e-05	4.100e-05	-176.61°
4	4.000e+03	4.609e-05	2.300e-05	60.05°
5	5.000e+03	1.664e-05	8.303e-06	0.15°
6	6.000e+03	1.350e-05	6.736e-06	-0.59°
7	7.000e+03	1.158e-05	5.779e-06	0.01°
8	8.000e+03	1.013e-05	5.057e-06	0.03°
9	9.000e+03	9.007e-06	4.496e-06	0.01°

Total Harmonic Distortion: 0.981122%(0.981123%)

N-Period=1

Fourier components of V(out1)

DC component:-0.032465

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	1.180e+01	1.000e+00	-0.50°
2	2.000e+03	6.599e-03	5.593e-04	77.31°
3	3.000e+03	1.010e-03	8.563e-05	175.41°

4	4.000e+03	7.211e-05	6.111e-06	-160.09°
5	5.000e+03	4.850e-05	4.110e-06	-179.66°
6	6.000e+03	4.187e-05	3.548e-06	179.86°
7	7.000e+03	3.591e-05	3.044e-06	-179.97°
8	8.000e+03	3.142e-05	2.663e-06	-179.97°
9	9.000e+03	2.793e-05	2.367e-06	-179.97°

Total Harmonic Distortion: 0.056586%(0.056588%)

N-Period=1
Fourier components of V(out)
DC component:0.00472358

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	2.004e+00	1.000e+00	-0.65°
2	2.000e+03	1.966e-02	9.811e-03	-91.72°
3	3.000e+03	8.215e-05	4.100e-05	-176.61°
4	4.000e+03	4.609e-05	2.300e-05	60.05°
5	5.000e+03	1.664e-05	8.303e-06	0.15°
6	6.000e+03	1.350e-05	6.736e-06	-0.59°
7	7.000e+03	1.158e-05	5.779e-06	0.01°
8	8.000e+03	1.013e-05	5.057e-06	0.03°
9	9.000e+03	9.007e-06	4.496e-06	0.01°

Total Harmonic Distortion: 0.981122%(0.981123%)

.step res=40000
N-Period=1
Fourier components of V(out)
DC component:0.00973575

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	2.610e+00	1.000e+00	-0.84°
2	2.000e+03	2.996e-02	1.148e-02	-91.56°
3	3.000e+03	1.693e-04	6.485e-05	-178.05°
4	4.000e+03	1.095e-04	4.194e-05	72.34°
5	5.000e+03	2.177e-05	8.343e-06	0.79°
6	6.000e+03	1.742e-05	6.673e-06	-1.93°
7	7.000e+03	1.498e-05	5.739e-06	0.14°
8	8.000e+03	1.311e-05	5.022e-06	0.21°
9	9.000e+03	1.165e-05	4.465e-06	0.12°

Total Harmonic Distortion: 1.148088%(1.148089%)

N-Period=1
Fourier components of V(out1)
DC component:-0.0685419

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	1.537e+01	1.000e+00	-0.69°
2	2.000e+03	3.240e-02	2.108e-03	81.51°
3	3.000e+03	2.599e-03	1.690e-04	173.38°
4	4.000e+03	2.307e-04	1.500e-05	-137.14°
5	5.000e+03	1.008e-04	6.554e-06	-178.77°
6	6.000e+03	9.047e-05	5.885e-06	179.43°
7	7.000e+03	7.784e-05	5.063e-06	-179.91°
8	8.000e+03	6.808e-05	4.429e-06	-179.89°
9	9.000e+03	6.052e-05	3.937e-06	-179.92°

Total Harmonic Distortion: 0.211459%(0.211462%)

N-Period=1
Fourier components of V(out)
DC component:0.00973575

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	2.610e+00	1.000e+00	-0.84°
2	2.000e+03	2.996e-02	1.148e-02	-91.56°
3	3.000e+03	1.693e-04	6.485e-05	-178.05°
4	4.000e+03	1.095e-04	4.194e-05	72.34°
5	5.000e+03	2.177e-05	8.343e-06	0.79°
6	6.000e+03	1.742e-05	6.673e-06	-1.93°
7	7.000e+03	1.498e-05	5.739e-06	0.14°
8	8.000e+03	1.311e-05	5.022e-06	0.21°
9	9.000e+03	1.165e-05	4.465e-06	0.12°

Total Harmonic Distortion: 1.148088%(1.148089%)

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.step res=50000
N-Period=1
Fourier components of V(out)
DC component:0.0178024
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Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	3.503e+00	1.000e+00	-1.14°
2	2.000e+03	4.596e-02	1.312e-02	-90.94°
3	3.000e+03	4.443e-04	1.268e-04	176.45°
4	4.000e+03	3.007e-04	8.583e-05	83.30°
5	5.000e+03	1.663e-05	4.747e-06	4.68°
6	6.000e+03	1.365e-05	3.897e-06	-14.33°
7	7.000e+03	1.169e-05	3.336e-06	0.66°
8	8.000e+03	1.018e-05	2.905e-06	1.22°
9	9.000e+03	9.053e-06	2.584e-06	0.67°

Total Harmonic Distortion: 1.311976%(1.311976%)

```
N-Period=1
Fourier components of V(out1)
DC component:-0.160942
```

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	2.064e+01	1.000e+00	-0.99°
2	2.000e+03	1.107e-01	5.361e-03	81.44°
3	3.000e+03	8.220e-03	3.982e-04	170.36°
4	4.000e+03	1.070e-03	5.183e-05	-122.61°
5	5.000e+03	2.173e-04	1.053e-05	-174.26°
6	6.000e+03	2.231e-04	1.081e-05	177.58°
7	7.000e+03	1.951e-04	9.452e-06	-179.89°
8	8.000e+03	1.703e-04	8.251e-06	-179.74°
9	9.000e+03	1.514e-04	7.332e-06	-179.83°

Total Harmonic Distortion: 0.537559%(0.537563%)

```
N-Period=1
Fourier components of V(out)
DC component:0.0178024
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Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	3.503e+00	1.000e+00	-1.14°
2	2.000e+03	4.596e-02	1.312e-02	-90.94°
3	3.000e+03	4.443e-04	1.268e-04	176.45°
4	4.000e+03	3.007e-04	8.583e-05	83.30°
5	5.000e+03	1.663e-05	4.747e-06	4.68°
6	6.000e+03	1.365e-05	3.897e-06	-14.33°
7	7.000e+03	1.169e-05	3.336e-06	0.66°
8	8.000e+03	1.018e-05	2.905e-06	1.22°

9 9.000e+03 9.053e-06 2.584e-06 0.67°
Total Harmonic Distortion: 1.311976%(1.311976%)

.step res=60000
N-Period=1
Fourier components of V(out)
DC component:0.0273476

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	4.952e+00	1.000e+00	-1.62°
2	2.000e+03	6.786e-02	1.370e-02	-88.16°
3	3.000e+03	1.855e-03	3.746e-04	164.31°
4	4.000e+03	9.775e-04	1.974e-04	96.75°
5	5.000e+03	6.900e-05	1.393e-05	-177.77°
6	6.000e+03	5.240e-05	1.058e-05	-147.16°
7	7.000e+03	3.561e-05	7.192e-06	179.65°
8	8.000e+03	3.289e-05	6.643e-06	177.14°
9	9.000e+03	2.936e-05	5.929e-06	179.18°

Total Harmonic Distortion: 1.371065%(1.371066%)

N-Period=1
Fourier components of V(out1)
DC component:-0.452581

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	2.923e+01	1.000e+00	-1.47°
2	2.000e+03	3.896e-01	1.333e-02	79.93°
3	3.000e+03	3.644e-02	1.247e-03	165.50°
4	4.000e+03	7.359e-03	2.518e-04	-117.99°
5	5.000e+03	4.299e-04	1.471e-05	-119.07°
6	6.000e+03	6.347e-04	2.172e-05	166.75°
7	7.000e+03	6.282e-04	2.149e-05	178.98°
8	8.000e+03	5.401e-04	1.848e-05	-179.14°
9	9.000e+03	4.761e-04	1.629e-05	-179.56°

Total Harmonic Distortion: 1.338999%(1.339008%)

N-Period=1
Fourier components of V(out)
DC component:0.0273476

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	4.952e+00	1.000e+00	-1.62°
2	2.000e+03	6.786e-02	1.370e-02	-88.16°
3	3.000e+03	1.855e-03	3.746e-04	164.31°
4	4.000e+03	9.775e-04	1.974e-04	96.75°
5	5.000e+03	6.900e-05	1.393e-05	-177.77°
6	6.000e+03	5.240e-05	1.058e-05	-147.16°
7	7.000e+03	3.561e-05	7.192e-06	179.65°
8	8.000e+03	3.289e-05	6.643e-06	177.14°
9	9.000e+03	2.936e-05	5.929e-06	179.18°

Total Harmonic Distortion: 1.371065%(1.371066%)

.step res=70000
N-Period=1
Fourier components of V(out)
DC component:-0.00120702

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	7.735e+00	1.000e+00	-2.59°

2	2.000e+03	6.602e-02	8.535e-03	-53.77°
3	3.000e+03	1.938e-02	2.505e-03	143.02°
4	4.000e+03	6.331e-03	8.185e-04	145.61°
5	5.000e+03	1.844e-03	2.384e-04	-138.37°
6	6.000e+03	8.212e-04	1.062e-04	-101.55°
7	7.000e+03	1.992e-04	2.575e-05	158.57°
8	8.000e+03	4.513e-04	5.834e-05	159.94°
9	9.000e+03	4.327e-04	5.593e-05	178.06°

Total Harmonic Distortion: 0.893652%(0.893764%)

N-Period=1
Fourier components of V(out1)
DC component:-1.85269

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	4.611e+01	1.000e+00	-2.48°
2	2.000e+03	1.916e+00	4.155e-02	75.97°
3	3.000e+03	3.437e-01	7.452e-03	155.60°
4	4.000e+03	1.204e-01	2.611e-03	-125.59°
5	5.000e+03	2.856e-02	6.193e-04	-55.10°
6	6.000e+03	8.638e-03	1.873e-04	44.15°
7	7.000e+03	5.411e-03	1.173e-04	139.14°
8	8.000e+03	4.095e-03	8.881e-05	-177.63°
9	9.000e+03	2.547e-03	5.524e-05	-168.01°

Total Harmonic Distortion: 4.230125%(4.230152%)

N-Period=1
Fourier components of V(out)
DC component:-0.00120702

Harmonic Number	Frequency [Hz]	Fourier Component	Normalized Component	Phase [degree]
1	1.000e+03	7.735e+00	1.000e+00	-2.59°
2	2.000e+03	6.602e-02	8.535e-03	-53.77°
3	3.000e+03	1.938e-02	2.505e-03	143.02°
4	4.000e+03	6.331e-03	8.185e-04	145.61°
5	5.000e+03	1.844e-03	2.384e-04	-138.37°
6	6.000e+03	8.212e-04	1.062e-04	-101.55°
7	7.000e+03	1.992e-04	2.575e-05	158.57°
8	8.000e+03	4.513e-04	5.834e-05	159.94°
9	9.000e+03	4.327e-04	5.593e-05	178.06°

Total Harmonic Distortion: 0.893652%(0.893764%)

Date: Mon May 09 10:47:41 2016
Total elapsed time: 3.762 seconds.

tnom = 27
temp = 27
method = Gear
totiter = 10328
traniter = 10316
tranpoints = 4942
accept = 4939
rejected = 2
matrix size = 55
fillins = 26
solver = Normal
Thread vector: 23.1/19.4[2] 4.7/2.7[2] 7.5/3.5[2] 1.4/2.3[1] 2592/500
Matrix Compiler1: 4.45 KB object code size 2.9/2.3/[1.6]
Matrix Compiler2: off [1.8]/2.3/3.5