

NOTES:

This circuit demonstrates AM Demodulation by multiplication using an MC1496 4-Quadrant Multiplier.

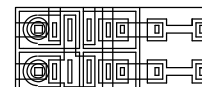
The full modulated input signal enters via the linear input pair, INP, INN.

The modulated signal is also clipped using a "comparator" (Q1, Q2, Q3), to remove modulation; and is then applied to the carrier inputs, CARN, CARN.

The comparator function can be accomplished in other ways as well, for example use a true differential comparator, or use ECL/PECL inverters.

(Large signals without too much modulation depth may not need a comparator.)

Simulation setup and results follow on the next two pages.



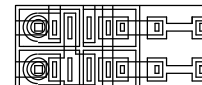
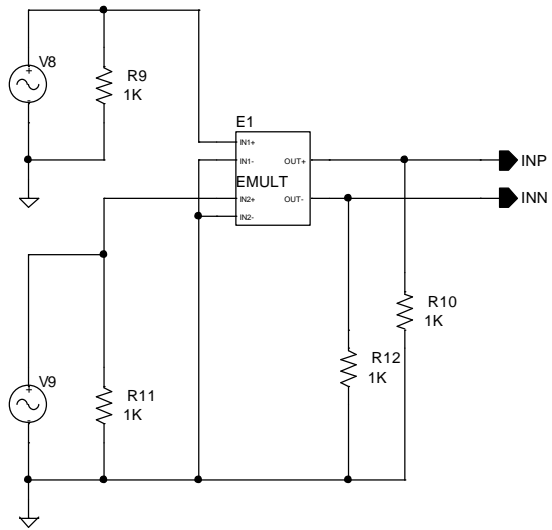
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824 E. CATHEDRAL ROCK DRIVE
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Title:
AM Demodulation Using MC1496

Size A FileName: ...AM-Demodulator-MC1496.sch REV A

July 28, 2004, 3:53 PM

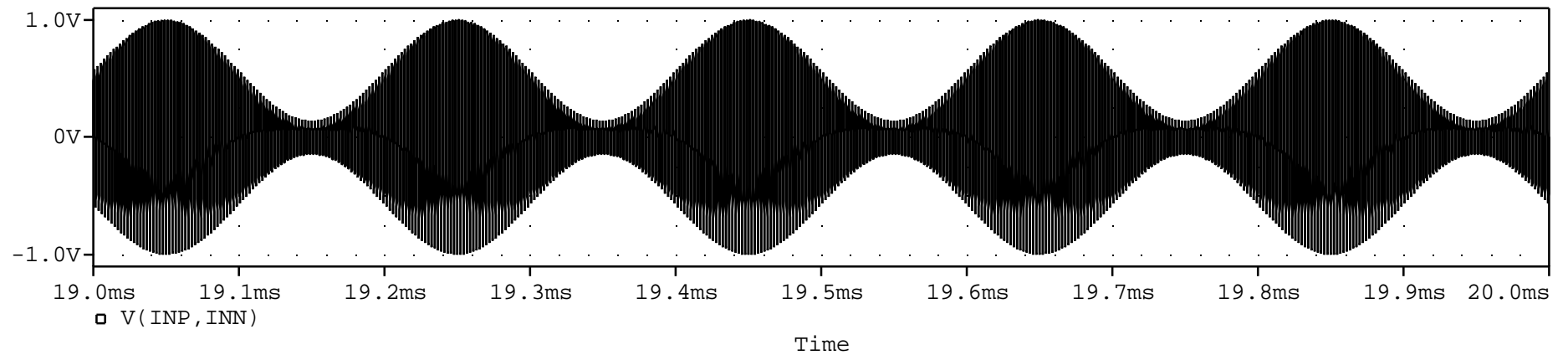
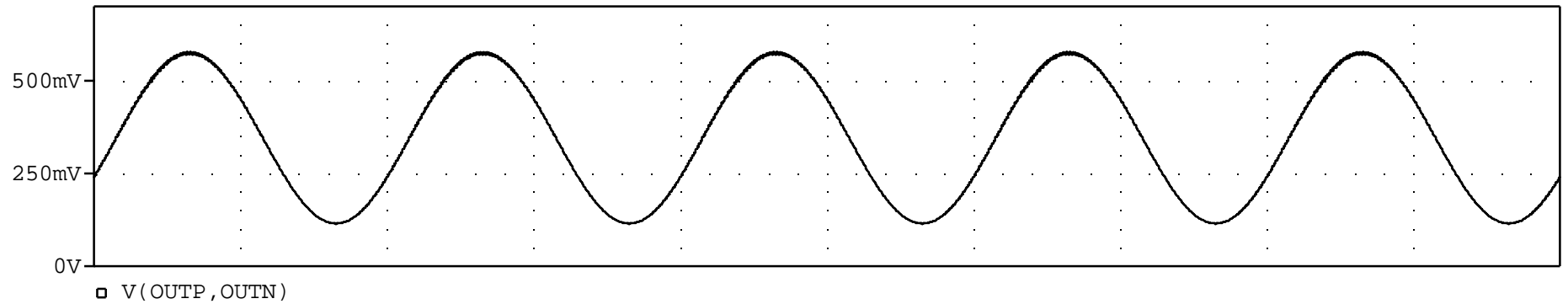
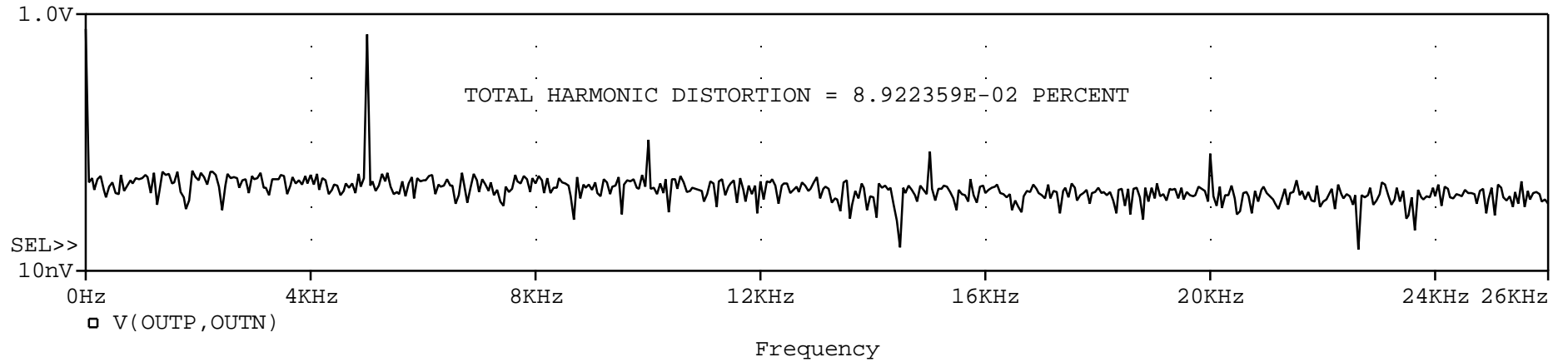
Sheet 1 of 2

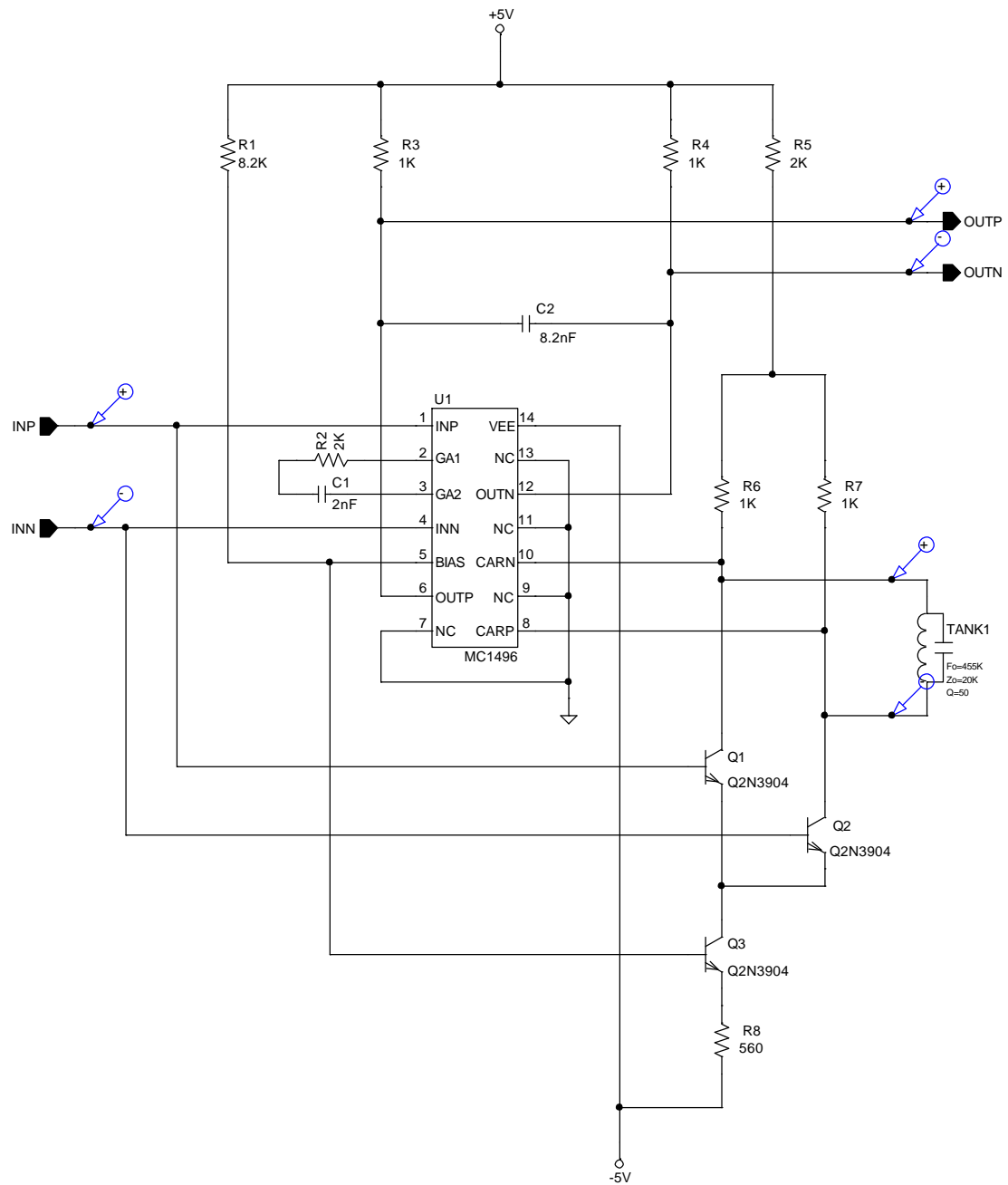


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Title: AM Demodulation Using MC1496		
Size A	FileName: ...VAM-Demodulator-MC1496.sch	REV A
July 28, 2004, 3:53 PM		Sheet 2 of 2

AM Demodulator Using MC1496

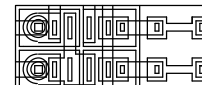




NOTES:

Added tank gives "flywheel" improvement during deep modulation.

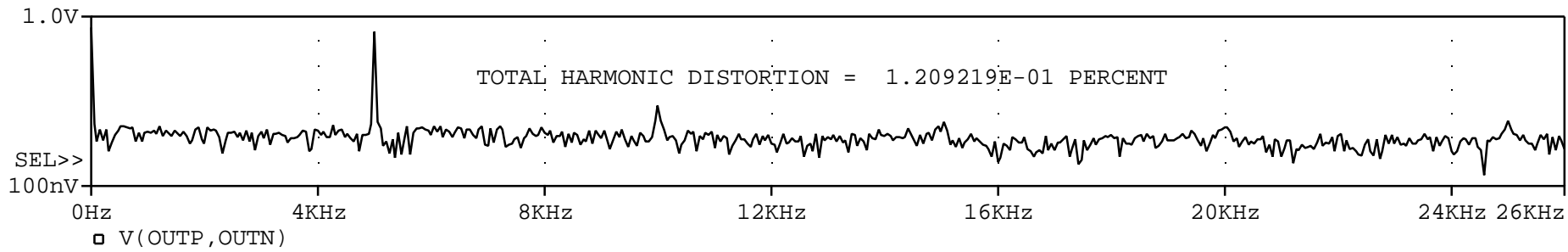
Simulation results follow on the next page.



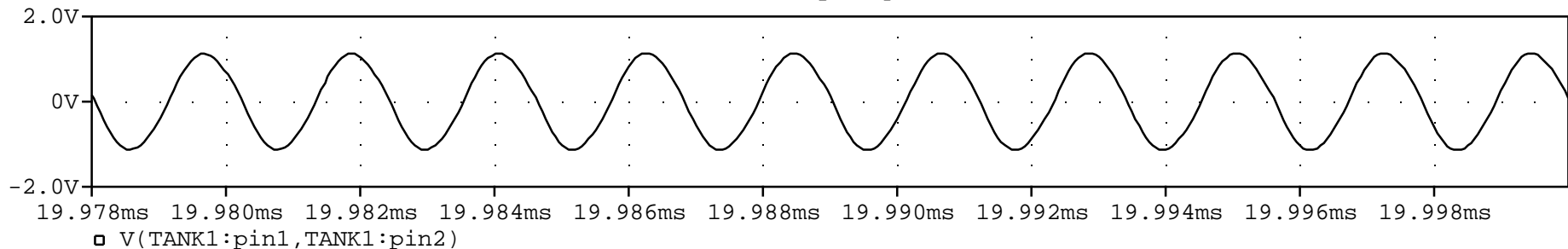
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Title: AM Demodulation Using MC1496		
Size A	FileName: ...AM-Demodulator-MC1496-wTank.sch	REV A
August 2, 2004, 12:10 PM		Sheet 1 of 2

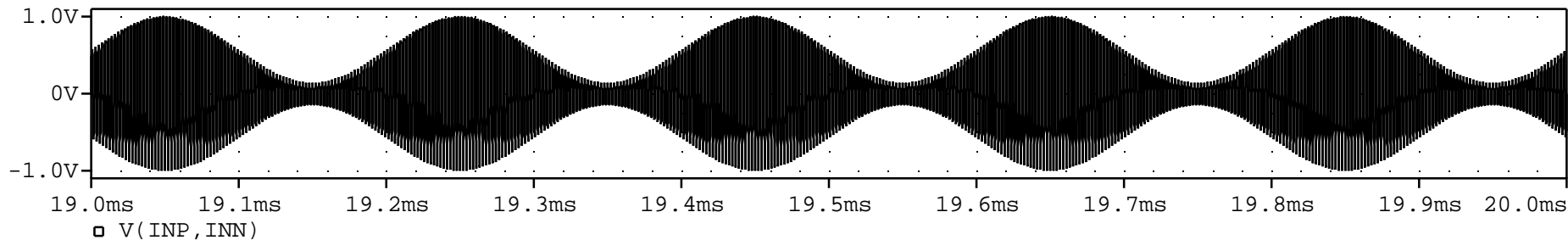
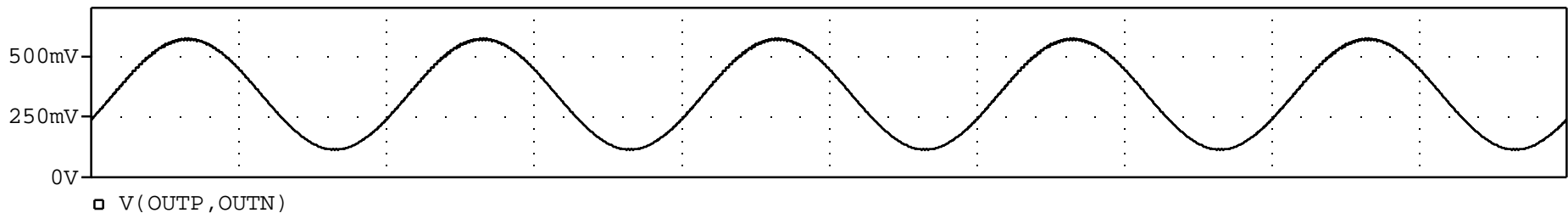
AM Demodulator Using MC1496, with Tank Added



Frequency



Time



Time