

# Difference Plot GNUPlot Output and Code

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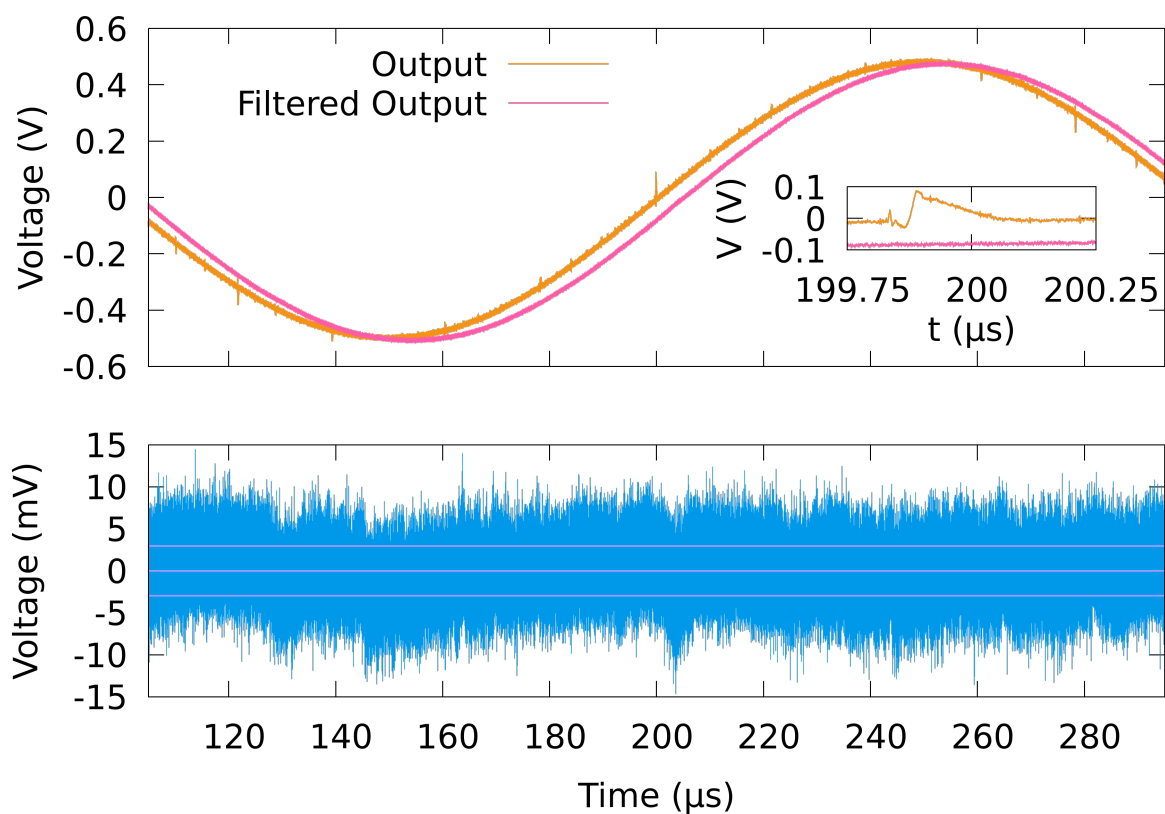


Figure 1: Paper, color version.

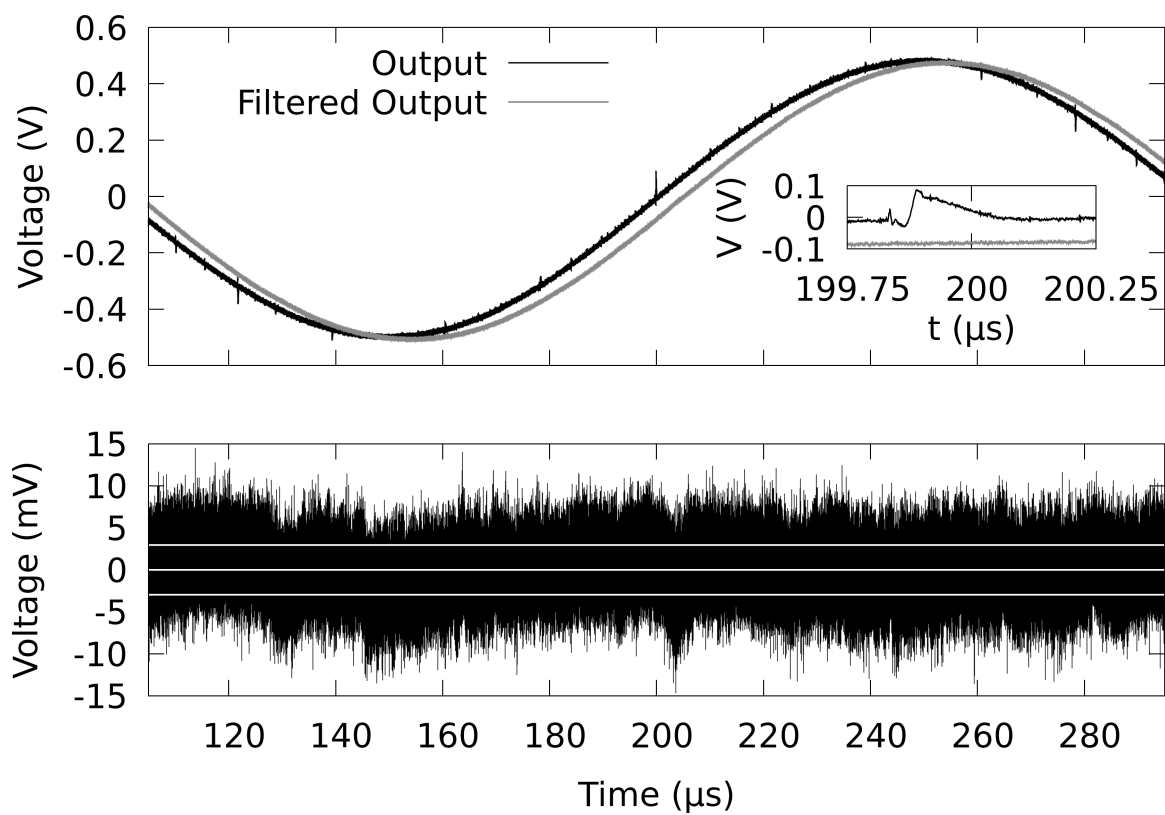


Figure 2: Paper, grayscale version.

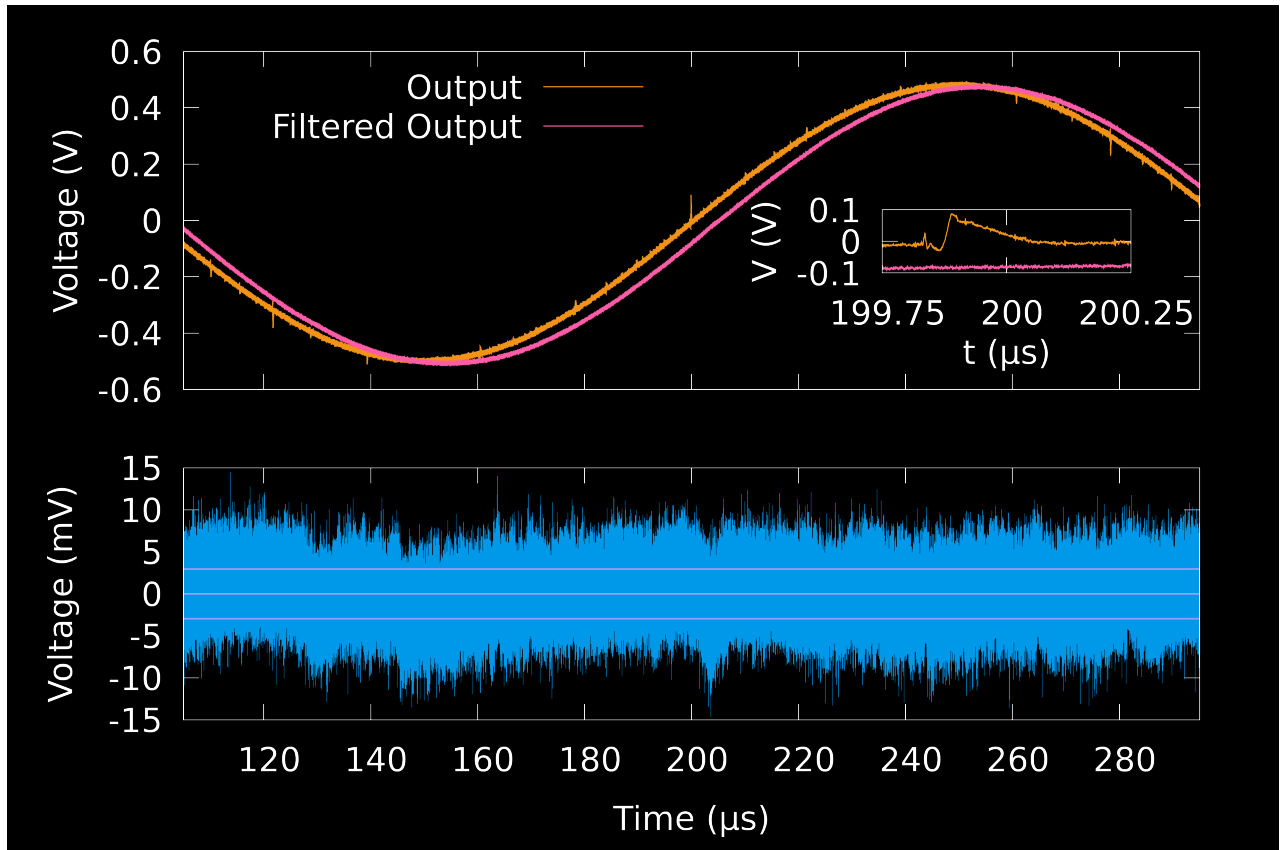


Figure 3: Dark Owl version (beamer slides).

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set terminal pngcairo transparent enhanced font "Droid Sans,72" \
    fontsize 1.0 size 3600, 2400

# Dark Owl
# text      = '#ffffff'
# aout      = '#f29318' # OwlYellow
# abessel4  = '#ff5ca8' # OwlRed
# adiff     = '#0098e9' # OwlBlue
# horiz     = '#a29bff' # (rgb(OwlRed) .+ rgb(OwlBlue)) norm. to max. blue
# set output 'diffplot-do.png'

# Paper Color
text      = '#000000'
aout      = '#f29318' # OwlYellow
abessel4  = '#ff5ca8' # OwlRed
adiff     = '#0098e9' # OwlBlue
horiz     = '#a29bff' # (rgb(OwlRed) .+ rgb(OwlBlue)) norm. to max. blue
set output 'diffplot-pc.png'

# Paper Grayscale
# text      = '#000000'

```

```

# aout      = '#000000'
# abessel4  = '#888888'
# adiff     = '#000000'
# horiz     = '#ffffff'
# set output 'diffplot-pg.png'

set border lw 3 lc rgb text
set key tc rgb text
set xlabel tc rgb text
set ylabel tc rgb text

set multiplot
set style increment default

set datafile separator ','
paout  = 'paout.csv'
padiff = 'padiff.csv'

# Difference
set size 1, 0.5
set origin 0, 0
set lmargin 8
set xtics auto
unset key
set xlabel 'Time (s)'
set ylabel 'Voltage (mV)'
set xrange [105:295] noreverse writeback
# set xrange [199:201] noreverse writeback # Faster to plot for debugging

plot \
    padiff u 1:2 w lines lw 2 lt rgb adiff, \
    padiff u 1:3 w lines lw 5 lt rgb horiz, \
    padiff u 1:($3 + $4) w lines lw 5 lt rgb horiz, \
    padiff u 1:($3 - $4) w lines lw 5 lt rgb horiz

# Waveforms zoom-in
set size 0.25, 0.25
set origin 0.695, 0.56
set lmargin 0
set xtics auto 0.25
set ytics auto 0.1
unset key
set xlabel 't (s)' offset 0,0.5
set ylabel 'V (V)' offset 1.25,0
set xrange [199.75:200.25] noreverse writeback

plot \
    paout u 3:($4 * 1e-3) w lines lw 4 lt rgb aout t '', \

```

```

        paout u 5:($6 * 1e-3) w lines lw 4 lt rgb abessel4 t ''

# Waveforms
set size 1, 0.5
set origin 0, 0.5
set lmargin 8
set xtics auto format ''
set ytics auto
unset xlabel
set key left top autotitle columnhead
set ylabel 'Voltage (V)'
set xrange [105:295] noreverse writeback
# set xrange [199:201] noreverse writeback # Faster to plot for debugging

plot \
    paout u 3:($4 * 1e-3) w lines lw 4 lt rgb aout t 'Output', \
    paout u 5:($6 * 1e-3) w lines lw 4 lt rgb abessel4 t 'Filtered Output'

unset multiplot

```