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<p>&nbsp;</p><a name="home">
</a>
<br />
<div style="text-align: center;">
<a href="#">[KEMBALI KE MENU SEBELUMNYA]</a></div>
<br />
<center>
<div style="background-color: white; border: 2px dashed rgb(23, 128, 221); height: 240px; overflow:
auto; padding: 10px; text-align: center; width: 330px;">
<b>DAFTAR ISI</b>
<br />
<div style="text-align: left;">
<a href="#tujuan">1. Tujuan</a></div>
<div style="text-align: left;">
<a href="#dasar">2. Dasar Teori</a></div>
<div style="text-align: left;">
<a href="#alat">3. Alat dan Bahan</a></div>
<div style="text-align: left;">
<a href="https://ldteunand.blogspot.com/p/tugas-pendahuluan.html#home">4. Tugas
Pendahuluan</a></div>
<div style="text-align: left;">
<a href="#prosedur">5. Prosedur Percobaan</a></div>
<div style="text-align: left;">
<a href="#percobaan">6. Percobaan</a><br /><br /><div style="text-align: left;">
<div><div style="margin: 5px;">
<div class="smallfont" style="margin-bottom: 2px;"><i><span style="font-weight: bold;">Percobaan ...
</span></i><input div="" onclick="if
(this.parentNode.parentNode.getElementsByTagName('div')[1].getElementsByTagName('div')[0].style.dis
play != '') {
this.parentNode.parentNode.getElementsByTagName('div')[1].getElementsByTagName('div')[0].style.dis
play = ''; this.innerText = ''; this.value = 'Hide'; } else {
this.parentNode.parentNode.getElementsByTagName('div')[1].getElementsByTagName('div')[0].style.dis

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Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-size: 14.49px;">Low pass filter (LPF) merupakan jenis filter yang berfungsi untuk meneruskan sinyal listrik yang frekuensinya berada dibawah frekuensi tertentu, diatas frekuensi tersebut (frekuensi cut off) maka sinyal akan diredam. Low pass filter memberikan redaman yang sangat kecil pada frekuensi di bawah frekuensi cut-off yang telah ditentukan, sedangkan frekuensi di atas frekuensi cut-off akan mendapatkan redaman yang sangat besar. Lebih sederhananya hanya frekuensi rendah saja yang dapat melewati rangkaian filter ini.</p><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-size: 14.49px; text-align: center;"></div><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-size: 14.49px; text-align: center;"><div class="separator" style="clear: both;"><div class="separator" style="clear: both;">Gambar 4.1 Rangkaian LPF dan Grafik Respon Frekuensi LPF</div><div class="separator" style="clear: both;">
</div><div class="separator" style="clear: both; text-align: left;">Frekuensi cut-off (fc) dari Low Pass Filter (LPF) dengan RC dapat dituliskan dalam</div><div class="separator" style="clear: both; text-align: left;">persamaan matematik sebagai berikut.</div></div></div><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-size: 14.49px; text-align: center;"></div><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px;">Tegangan output (Vout) filter pasif LPF seperti terlihat pada rangkaian diatas dapat diekspresikan dalam persamaan matematis sebagai berikut.</div><p class="MsoBodyText" style="line-height: 150%; margin-bottom: 0cm; margin-left: 42.55pt; margin-right: 32.6pt; margin-top: .05pt; margin: 0.05pt 32.6pt 0cm 42.55pt; text-align: justify; text-indent: 1cm;"><br style="color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px; text-align: start; text-indent: 0px;" /></p><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px; text-align: center;"></div><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px;">Tegangan output (Vout) filter pasif LPF seperti terlihat pada rangkaian diatas dapat diekspresikan dalam persamaan matematis sebagai berikut.</div><p class="MsoBodyText" style="line-height: 150%; margin-bottom: 0cm; margin-left: 42.55pt; margin-right: 32.6pt; margin-top: .05pt; margin: 0.05pt 32.6pt 0cm 42.55pt; text-align: justify; text-indent: 1cm;"><br style="color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px; text-align: start; text-indent: 0px;" /></p><p style="color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px;"></p><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px; text-align: center;"></div><p style="color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px;"></p><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px; text-align: center;">Gambar 4.2 Rangkaian HPF dan Grafik Respon Frekuensi HPF</div><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px; text-align: center;">
</div><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px; text-align: center;"><div class="separator" style="clear: both; text-align: left;">Frekuensi cut-off (fc) rangkaian high pass filter adalah:</div></div><p style="color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px;"></p><div class="separator" style="clear: both; color: #333333; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 14.49px; text-align: center;"></div></div><p><b style="text-align: left;">3. Alat dan Bahan[Kembali]</p><p style="text-align: justify;"> <b style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;">A. Alat</p><div class="separator" style="clear: both; text-align: center;"><div style="background: 0px 0px rgb(255, 255, 255); border: 0px; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"><b style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; outline: 0px; padding: 0px; vertical-align: baseline;"> </div><span lang="EN-GB" style="background-attachment: initial; background-clip: initial; background-image: initial;

background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; font-size: 12pt; outline: 0px; padding: 0px; text-indent: -21.3pt; vertical-align: baseline;">Multimeter</div><div style="background: 0px 0px rgb(255, 255, 255); border: 0px; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;"><b style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; outline: 0px; padding: 0px; vertical-align: baseline;"><div class="separator" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; clear: both; outline: 0px; padding: 0px; vertical-align: baseline;">
</div>
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;"></div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"><b style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; outline: 0px; padding: 0px; vertical-align: baseline;"> b). Jumper</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;"><div class="separator" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; clear: both; outline: 0px; padding: 0px; vertical-align: baseline;"><a href="https://blogger.googleusercontent.com/img/b/R29vZ2xl/AVvXsEghH3sLkAeHWjFRMfU1uYkH5o0H Z8HGPPWW4J6fAJhyvruOGwAgODUqeavd4ACKLfMjVZDW0PzsGydu12pHb8SuJSHApr0iVopPtRF1uG-8MP vWf2DyF9fZ64tArpPwLr7XegCbUxTZ0bvQkFGqbdwpAut05MFZ2h5vt4NPb7rfZGm1FYAto8DY9Eve_bl/s10

00/jumper%201.jpg" style="background: 0px 0px transparent; border: 0px; clear: none; color: #cc0033; float: none; margin-left: 1em; margin-right: 1em; outline: 0px; padding: 0px; text-decoration-line: none; transition: color 0.17s ease 0s; vertical-align: baseline;"></div><div class="separator" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; clear: both; outline: 0px; padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"> c). DC Power Supply
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;"></div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"> d)

Osiloskop</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;"></div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"> (e) Function generator</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;"></div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border:

Opx; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"><b style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; outline: 0px; padding: 0px; vertical-align: baseline;">B. Bahan</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"> </div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"> a) Module elektronika analog <i style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; font-family: "Times New Roman"; serif; font-size: 12pt; outline: 0px; padding: 0px; text-align: justify; vertical-align: baseline;">Operational Amplifier</i> </div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px; vertical-align: baseline;"><div class="separator" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px; clear: both; outline: 0px; padding: 0px; vertical-align: baseline;"></div>
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border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px;
padding: 0px; vertical-align: baseline;">
</div><div class="separator" style="background: 0px 0px
rgb(255, 255, 255); border: 0px; clear: both; color: #333333; font-family: Roboto, sans-serif; font-size:
15px; outline: 0px; padding: 0px; text-align: start; vertical-align: baseline;"> b)
Resistor</div><div class="separator" style="background: 0px 0px rgb(255, 255, 255); border: 0px; clear:
both; color: #757575; font-family: Roboto, sans-serif; font-size: 15px; outline: 0px; padding: 0px;
vertical-align: baseline;"><a
href="https://1.bp.blogspot.com/-H73Lv62mQEo/YYXyylRbppl/AAAAAAAC6E/O-3pVa526UIIOaXC40szh
4svVI6ol69sQCLcBGAsYHQ/s1200/re.jpg" style="background: 0px 0px transparent; border: 0px; clear:
none; color: #003ee6; float: none; margin-left: 1em; margin-right: 1em; outline: 0px; padding: 0px;
text-decoration-line: none; transition: color 0.17s ease 0s; vertical-align: baseline;"></div></div><div class="separator" style="clear: both; text-align:
center;"> </div><div class="separator" style="clear: both;
text-align: center;">
</div><div class="separator" style="clear: both;"> </div><div
style="text-align: justify;">4. Tugas Pendahuluan</div><div style="text-align: justify;"><br
</div><p><p><p><p>5.
Prosedur Percobaan[Kembali]

<div>
</div><div><div style="color: #333333; font-family: Georgia, Utopia, "Palatino
Linotype", Palatino, serif; font-size: 14.49px;"><b style="background-color: white;">4.1 LPF
-20dB</div><div style="color: #333333; font-family: Georgia, Utopia, "Palatino
Linotype", Palatino, serif; font-size: 14.49px;"><span style="background-color:
white;"> 1. Carilah rangkaian LPF -20dB di dalam module RS-A04 Operational
Amplifier 2</div><div style="color: #333333; font-family: Georgia, Utopia, "Palatino
Linotype", Palatino, serif; font-size: 14.49px;"><span style="background-color:
white;"> 2. Hubungkan catu daya modul RS-A04 Opertational Amplifier
2.</div><div style="color: #333333; font-family: Georgia, Utopia, "Palatino
Linotype", Palatino, serif; font-size: 14.49px;"><span style="background-color:
white;"> 3. Hubungkan function generator ke modul RS-A04 Opertational Amplifier
2.</div><div style="color: #333333; font-family: Georgia, Utopia, "Palatino
Linotype", Palatino, serif; font-size: 14.49px;"><span style="background-color:
white;"> 4. Hubungkan probe pertama osiloskop ke V1 dan probe kedua pada

Vo.

5. Atur frekuensi sesuai dengan jurnal 100Hz-1kHz.

6. Perhatikan gambar sinyal pada osiloskop.

7. Ukur tegangan input dan output menggunakan multimeter.

8. Catat hasil praktikum ke jurnal yang telah disediakan.

4.2 LPF -40dB

1. Carilah rangkaian LPF -40dB di dalam module RS-A04 Operational Amplifier 2

2. Hubungkan catu daya modul RS-A04 Operational Amplifier 2.

3. Hubungkan function generator ke modul RS-A04 Operational Amplifier 2.

4. Hubungkan probe pertama osiloskop ke V1 dan probe kedua pada Vo.

5. Atur frekuensi sesuai dengan jurnal 200Hz-1kHz.

6. Perhatikan gambar sinyal pada osiloskop.

7. Ukur tegangan input dan output menggunakan multimeter.

8. Catat hasil praktikum ke jurnal yang telah disediakan.

4.3 HPF 20dB

[illegible]