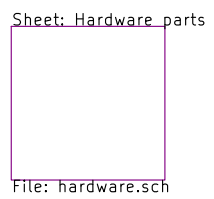
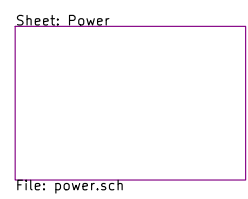
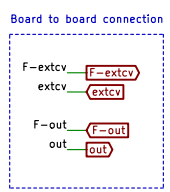


VCO	Gate
LFO	FM
Release	Sweep
Noise lvl	Ext lvl
Trig In	CV In
	Ext in
	Out



First Release

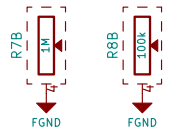
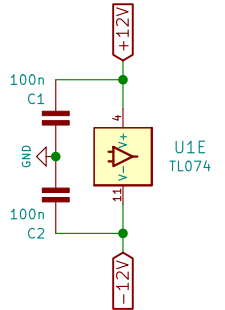
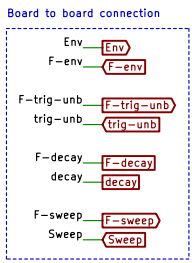
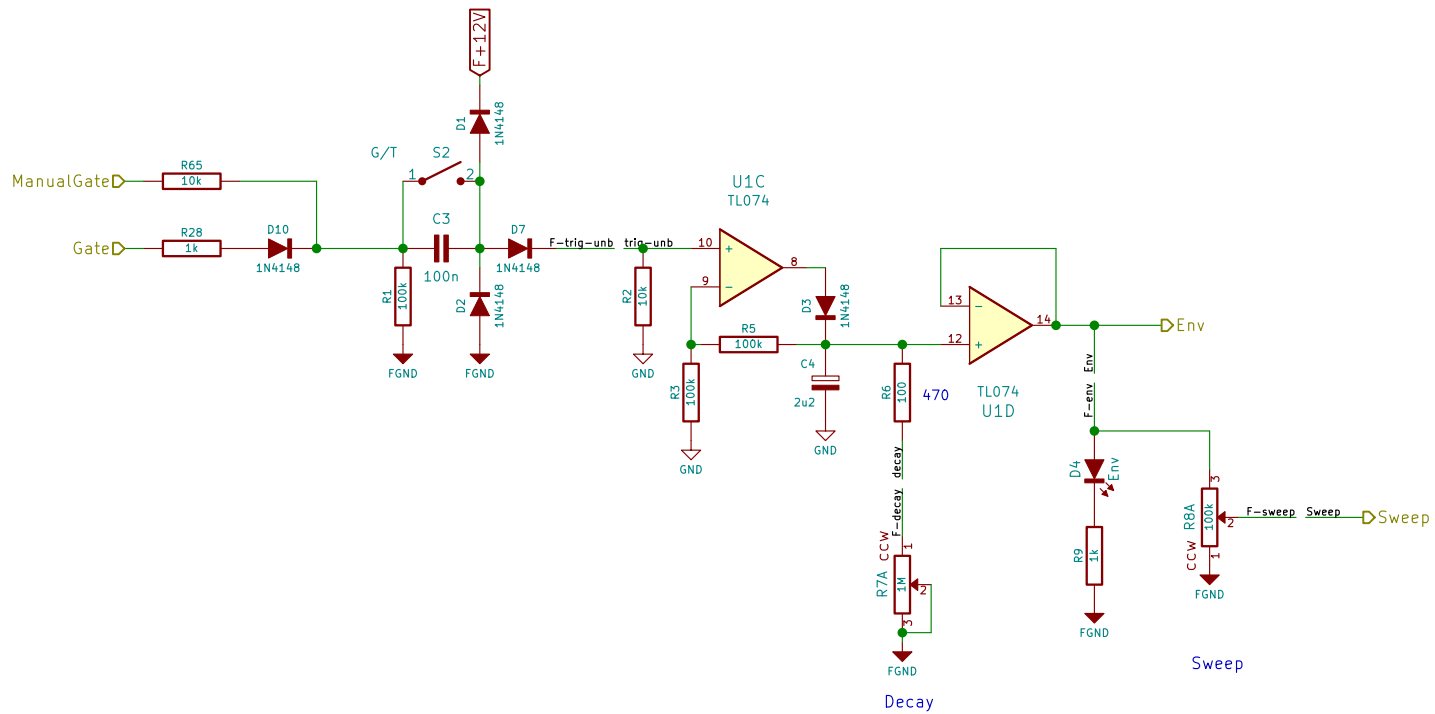
<http://www.davidhailant.com>

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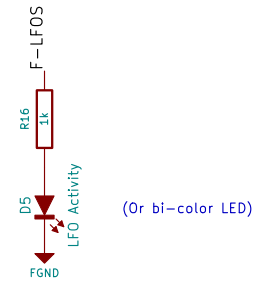
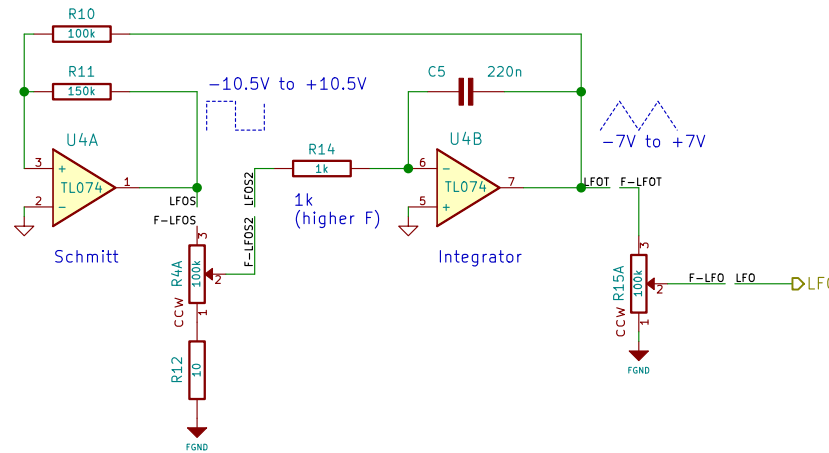
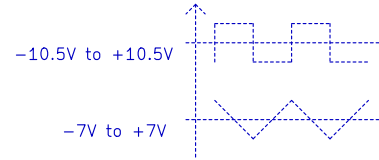
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File: dm77.sch

**Title: Drum Module 77**

Size: A4	Date: 2019-11-26	Rev: 1.0
KiCad E.D.A. kicad 5.1.5-52549c584ubuntu16.04.1		Id: 1/9

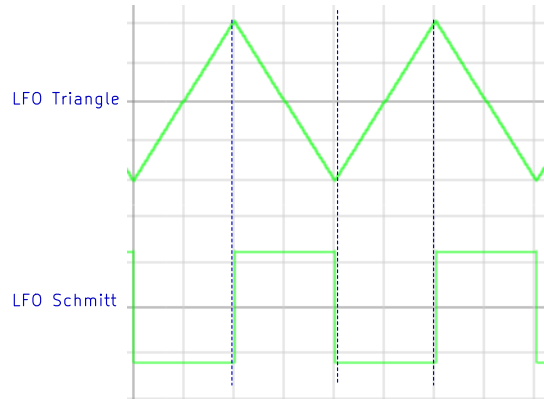


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Sheet: /Input/	
File: input.sch	
<b>Title: Drum Module 77</b>	
Size: A4	Date: 2019-11-26
KiCad E.D.A. kicad 5.1.5-52549c584ubuntu16.04.1	Rev: 1.0
	Id: 2/9

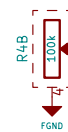


LFO Rate  
100k

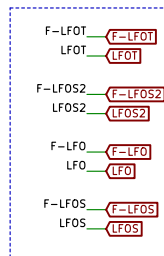
LFO Mod.  
50k LOG



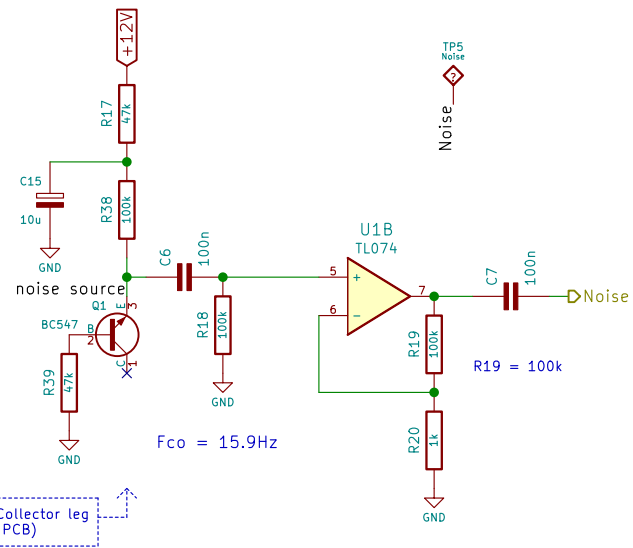
<http://tinyurl.com/y982m8vn>



Board to board connection



Inspired by ASM-1 LFO	
<a href="http://www.davidhailant.com">http://www.davidhailant.com</a>	
David Hailant	
Sheet: /LFO/	
File: lfo.sch	
<b>Title: Drum Module 77</b>	
Size: A4	Date: 2019-11-26
KiCad E.D.A. kicad 5.1.5-52549c584ubuntu16.04.1	Rev: 1.0
	Id: 3/9



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Sheet: /Noise generator/

File: noise\_gen.sch

**Title: Drum Module 77**

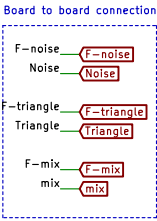
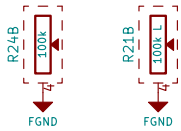
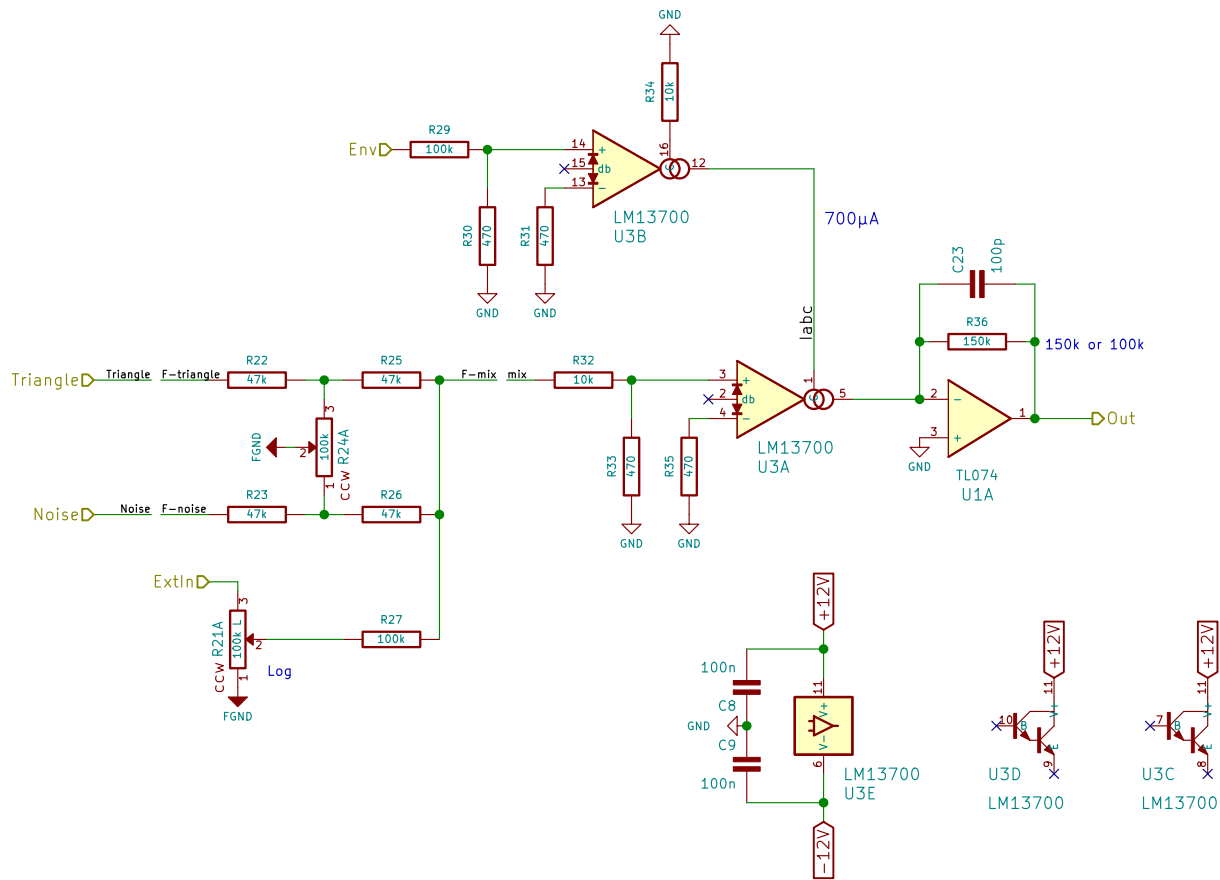
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Date: 2019-11-26

**Rev: 1.0**

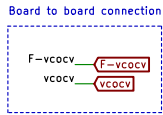
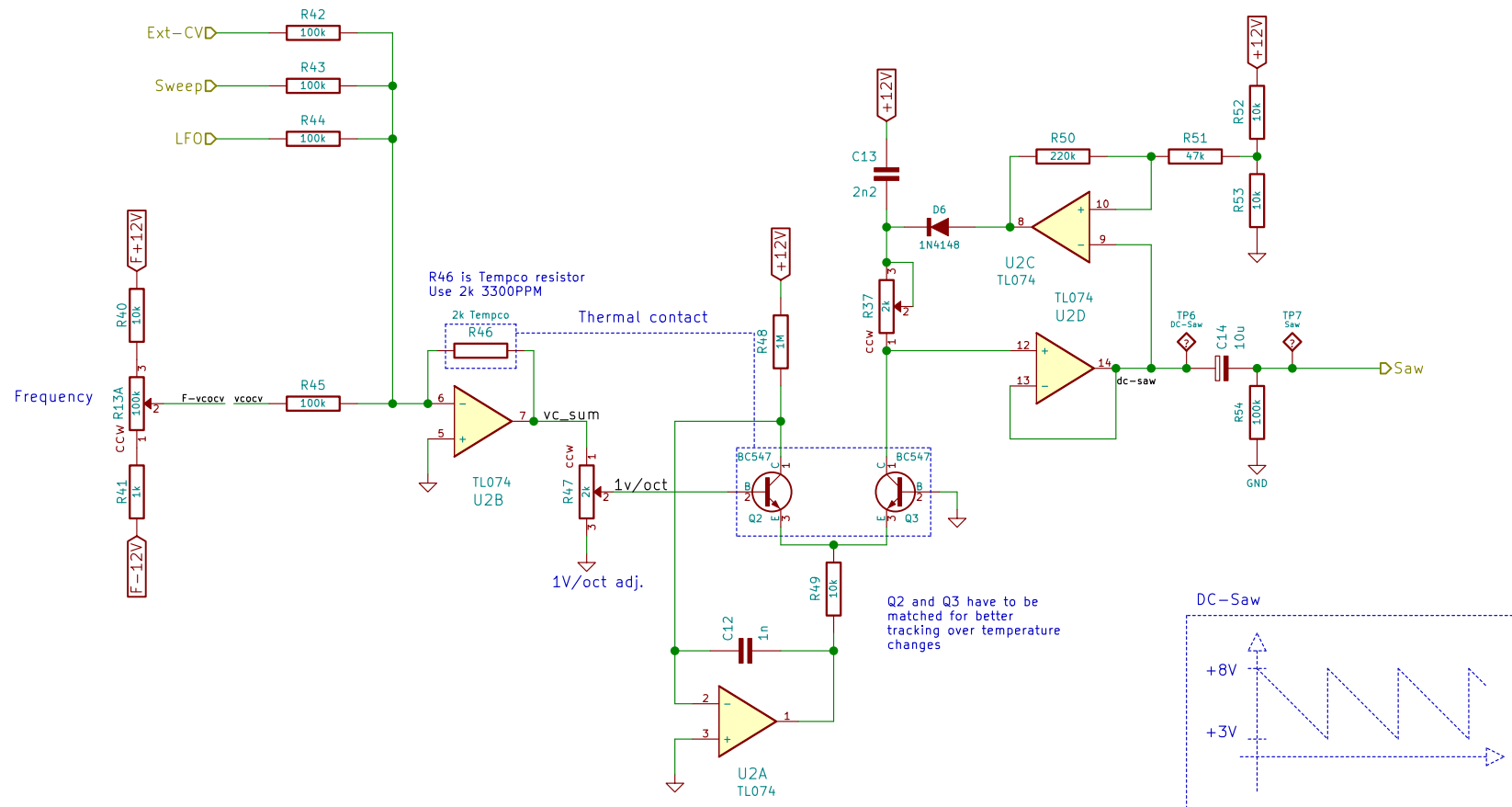
KiCad E.D.A. kicad 5.1.5-52549c584ubuntu16.04.1

Id: 4/9

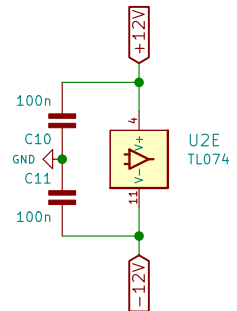


0.2  
- C23 added for high frequency noise suppression when output loaded

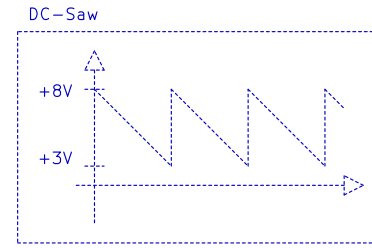
<a href="http://www.davidhailant.com">http://www.davidhailant.com</a> <b>David Hailant</b> Sheet: /VCA/ File: vca.sch	
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Size: A4	Date: 2019-11-26
KiCad E.D.A. kicad 5.1.5-52549c584ubuntu16.04.1	Rev: 1.0 Id: 5/9



**Calibration procedure:**  
 Set a low Freq. (Eg. 100Hz) then apply 1V CV.  
 Frequency MUST exactly double.  
 If lower, turn R47 to make freq. LOWER.  
 If higher, turn R47 to make freq. HIGHER.  
 Remove CV. Set again to low freq (100Hz) and apply 1V CV.  
 Repeat until frequency doubles for each volt added on CV.

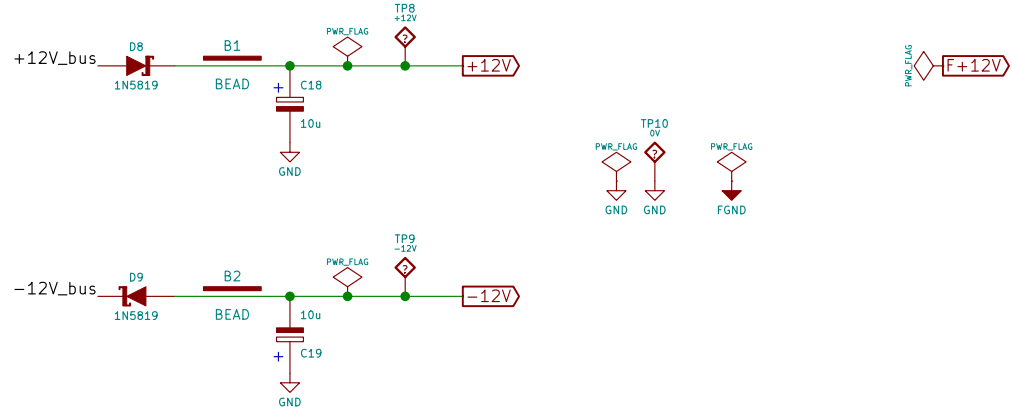
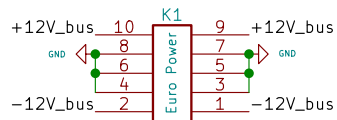


Q2 and Q3 have to be matched for better tracking over temperature changes



**Revision History**  
 0.2:  
 - reversed R47. Turn clockwise = increase CV effect.

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Sheet: /Oscillator/	
File: oscillator.sch	
<b>Title: Drum Module 77</b>	
Size: A4	Date: 2019-11-26
KiCad E.D.A. kicad 5.1.5-52549c584ubuntu16.04.1	Rev: 1.0
	Id: 6/9



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Sheet: /Power/

File: power.sch

**Title: Drum Module 77**

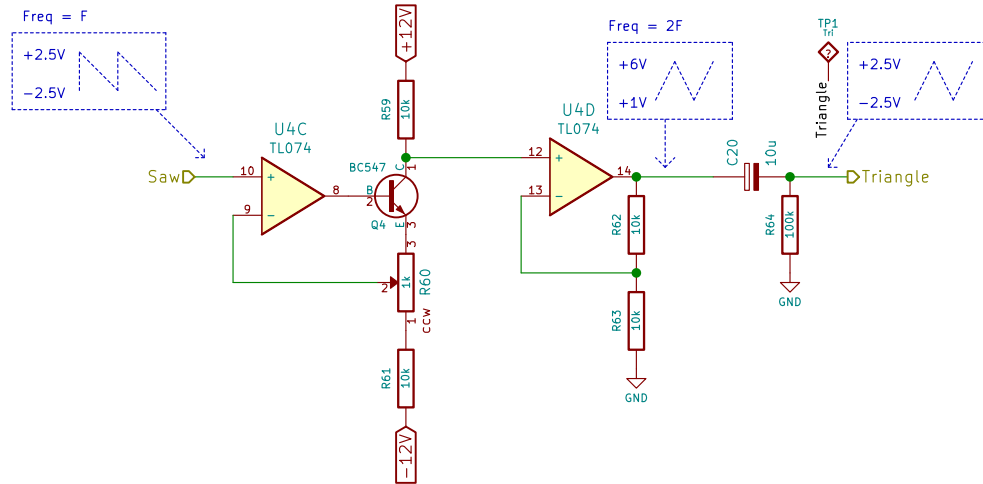
Size: A4

Date: 2019-11-26

**Rev: 1.0**

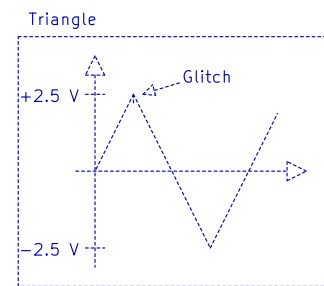
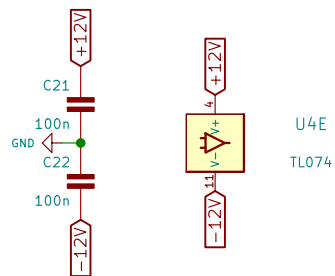
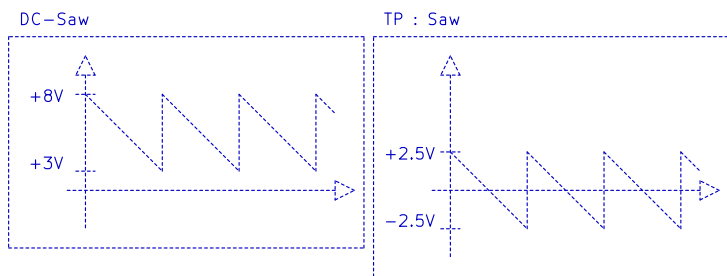
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Id: 7/9



Adjustment procedure:  
Turn R60 until high frequency content fades out.

<http://tinyurl.com/y839wjb5>



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Sheet: /Saw to Triangle/

File: saw2tri.sch

**Title: Drum Module 77**

Size: A4

Date: 2019-11-26

Rev: 1.0

KiCad E.D.A. kicad 5.1.5-52549c584ubuntu16.04.1

Id: 8/9



