AC coupling caps can be polarized electrolytics or film caps.
Make sure the polarity is right!

Filter Stages

3340 Output DC bias: typ = 6.5V @ VCC = 15V Vin = 0V

Input buffer

10Vpp Audio_in — R2 100K — U1A TL072

The chip can surprisingly handle 10Vpp audio signals!

3320 Stage 1: 3320_IN1, 3320_Out1
3320 Stage 2: 3320_IN2, 3320_Out2
3320 Stage 3: 3320_IN3, 3320_Out3
3320 Stage 4: 3320_IN4, 3320_Out4

R5 91K, R6 100K, R7 91K, R8 100K, R9 91K, R10 100K, R11 91K, R12 100K, C15 2.2uF

R17 220K → −12V
R18 220K → −12V
R16 220K → −12V

Filter stage capacitors

3320_Cap1, 3320_Cap2, 3320_Cap3, 3320_Cap4
C4 270pF, C5 270pF, C6 270pF, C7 270pF → GND

Output Buffer (Sequential Pro One)

VppOut = VCC − 3V
9Vpp max
U1B TL072 Gain = 3.2
R14 68K, R21 100K, 220K R19
Test output levels!
Output amplitude trim
R15 1K, RV1 2K, C1 2.2uF, R20 51K, R22 3K3
3320_Vres
10Vpp Audio_out

U3 AS3320

3320_IN1	1	18	3320_IN4
3320_IN2	2	17	3320_IN3
	3	16	3320_Cap3
3320_Cap2	4	15	3320_Out3
3320_Cap1	5	14	
3320_Out2	6	13	
3320_Out1	7	12	3320_Freq_control_in
3320_Vres	8	11	3320_Cap4
3320_Reso_control_in	9	10	3320_Out4

IN1, IN2, GND, Cap2, Cap1, Out2, Out1, Vres, Reso_control_in
IN4, IN3, Cap3, Out3, VCC, VEE, Freq_control_in, Cap4, Out4

+12V → C8 100nF → GND
C9 100nF → −12V → GND
R28 1K2 REE = (VEE−2.7)/0.08

Frequency Control Circuit

Tested good

Freq CV gain Trim: RV2 50K, R23 68K

Freq_Control — GND R24 100K — RV3 100K → −12V
U2A TL074
R25 100K → −102.28mV to 176.92mV 3320_Freq_control_in
R26 1K8 → GND

10Vpp Freq_CV_in — R27 100K — RV4 10K → GND
Freq CV Amount

Resonance Control Circuit

Untested

Reso CV gain Trim: RV5 50K, R29 68K

+12V — Reso Control — R31 100K — RV6 100K → GND
U2B TL074
R30 100K
U2C TL074
R32 100K, R33 150K
−102.5mV to 215.3mV 3320_Reso_control_in
R34 3.3K → GND

10Vpp Reso_CV_In — R35 100K — RV7 10K → GND
Reso CV amount

Power

J1 EuroPower_JST_3P: +12v, GND, −12v
+12V_IN, −12V_IN, PWR_FLAG, GND

EURO_PWR_16P J2
GATE, CV, +5V, +12V, GND, −12V
D1, D2
C12 22uF, C13 22uF

Op amp power and decoupling

U1C TL072, U2E TL074
C10 100nF, C11 100nF

U2D TL074

This version is a prototype
DIYSynthMNL
Sheet: /
File: 3320-VCF.kicad_sch

Title: Eurorack 3320 Low Pass VCF

Size: A3	Date: 2024-01-22	**Rev: 0.1.1**
KiCad E.D.A. kicad 7.0.9		Id: 1/1