XQP 531 Optical De-esser

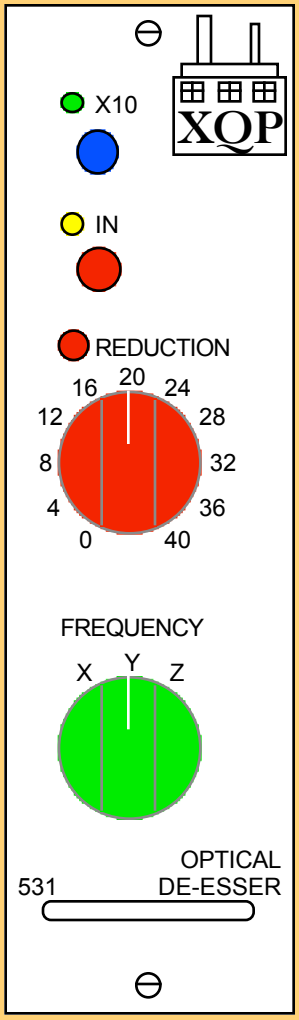
500 Series VPR Module

The XQP 531 Optical De-esser provides smooth, non-destructive de-essing in the convenient VPR format. Dual VACTROL optoisolators insure consistent optical gain reduction when sibilance is present. The 531's sidechain utilizes a high pass filter with three selectable corner frequencies (rather than a narrow bandpass filter), so sibilance occurring at different frequency points can be effectively reduced.

The 531 is built with high-quality Analog Devices opamps in the signal path.

The XQP 531 is a re-creation of the original Dane Optical De-esser #31 designed and manufactured in the 1990's.

Minor circuitry adjustments have been made to enhance stability and consistency.



X10 switch

Increases sidechain sensitivity by 10
Green LED indicates X10

IN switch

Silently activates de-essing
Yellow LED indicates IN

REDUCTION potentiometer

Adjusts the amount of sibilance reduction
Red LED lights with de-essing action

FREQUENCY switch

Provides 3 corner frequency choices
for the sidechain's high pass filter

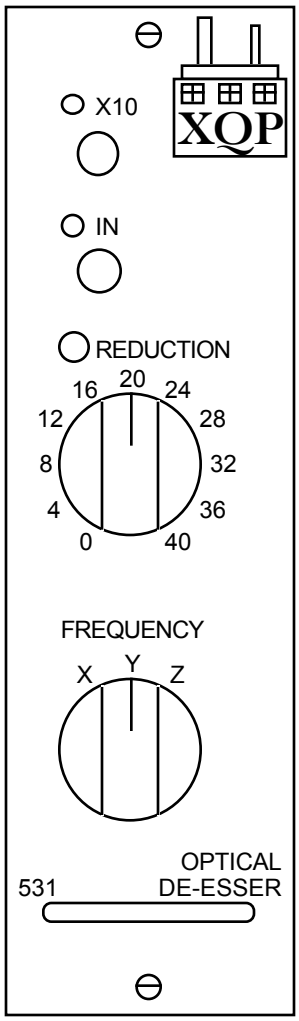
SPECIFICATIONS

Input impedance:	43KΩ balanced
Output impdedance:	50Ω balanced
Frequency response:	4Hz - 90KHz (-3dB)
Max. output level:	22dBu
THD:	<0.002% @ 1KHz
Noise:	-80dBm, unweighted
Attack time:	10msec.
Release time:	18msec.
Current requirement:	86mA @ ±16VDC

XQP
610 N. 14th Street
Enid, OK 73701

580-231-1941
www.xqpaudio.com

XQP 531 Owner's Guide



INTRODUCTION

Thank you for purchasing the XQP 531 Optical De-esser. The 531 is a high frequency limiter designed specifically for control of sibilance. It uses a pair of VACTROL® optoisolators to provide smooth high frequency gain reduction for natural de-essing.

The 531 is a VPR module (hopefully you are already aware of this) designed to fit into the common 500 series racks orginated by API. It follows the standard API pinout.

XQP is a member of API's VPR Alliance, and the 531 is an approved APR Alliance product.

1. Chassis
2. + Output
3.
4. - Output
5. Audio Common
6.
7.
8. - Input
9.
10. + Input
11.
12. + 16 VDC
13. Power Ground
14. - 16 VDC
15.

OPERATION

The 531 is simple to use. The FREQUENCY switch allows you to select one of three cutoff points for the sidechain's high pass filter. These points, labeled X, Y, and Z (long before it was realized that XQP would be making this product) are in the area of 3, 5, and 7KHz respectively. As mentioned, the filter is high pass - not band pass. This ensures that all sibilance occurring above the selected frequency point will be dealt with by the optoisolators. You are not forced to home in on a very narrow frequency band. Simply select the highest of the three points that allows adequate sibilance reduction.

The amount of gain reduction is adjusted with the REDUCTION control in conjunction with the X10 switch. The X10 switch multiplies the sensitivity of the sidechain by a factor of ten, allowing the 531 to be used effectively on low level signals. With a +4 signal, it allows all consonents to be totally obliterated, guaranteeing loss of employment, so use with caution. The red LED lights up when gain reduction is taking place in the same manner as the LEDs in the optoisolators, providing a meter of gain reduction.

Finally, the IN switch activates the sidechain. Disengaging this switch silently bypasses the unit, although the audio path remains active.

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We think you will find the 531 a very smooth and unobtrusive sibilance controller. We have not attempted a surgical device here, but a musical one. We believe that subtle processing is the best approach for this task. After all, you don't want to eliminate sibilance, but reduce it. We don't *think* you want to eliminate it, but it's a free country.

WARRANTY

The XQP 531 Optical De-esser is warranted for ten years from the date of purchase. You do not have to fill out the enclosed warranty card, but we would appreciate the info. You may also register your 545 online at www.xqpaudio.com.

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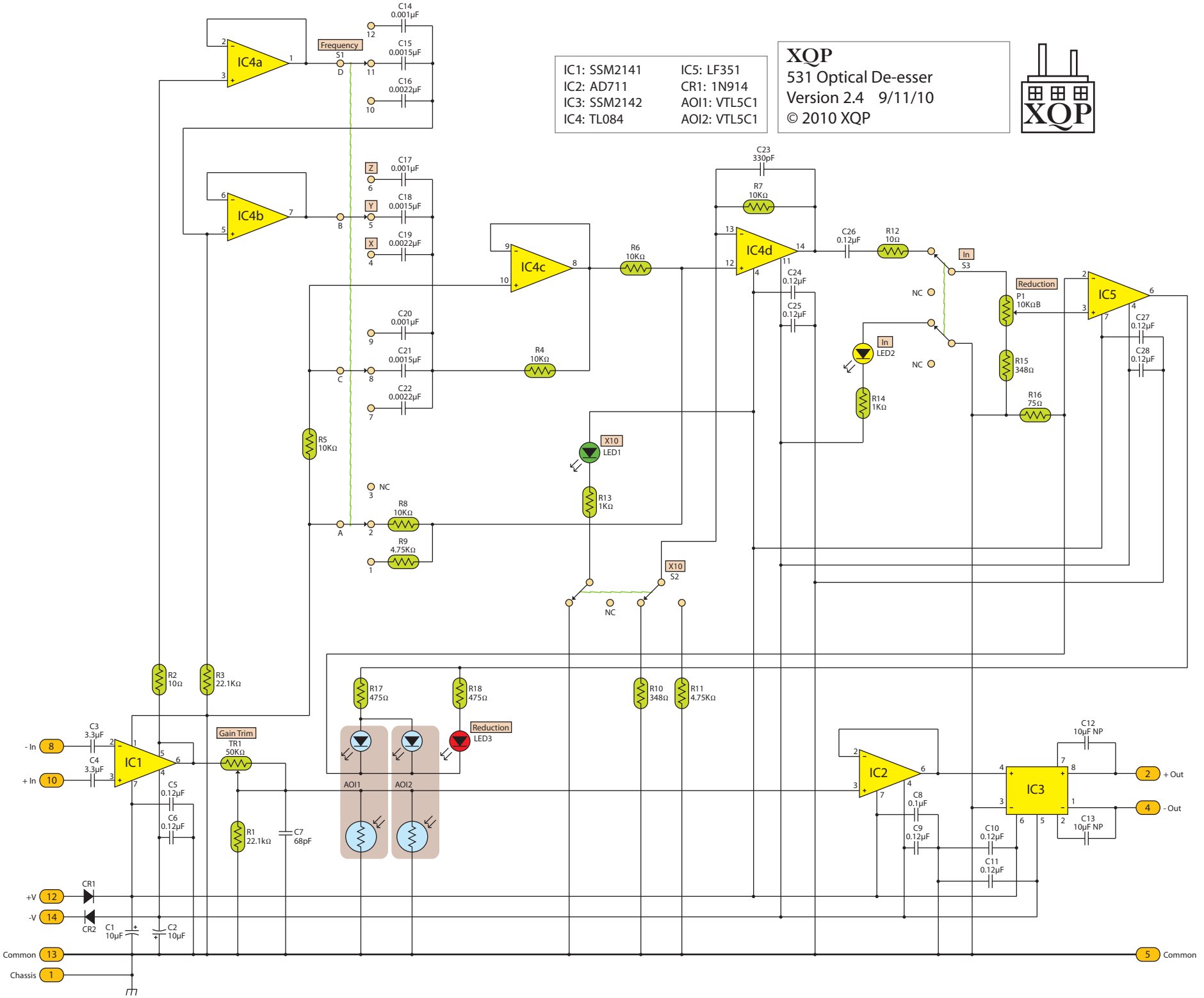
IC1: SSM2141
IC2: AD711
IC3: SSM2142
IC4: TL084
IC5: LF351
CR1: 1N914
AOI1: VTL5C1
AOI2: VTL5C1
XQP
531 Optical De-esser
Version 2.4 9/11/10
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IC4a
IC4b
IC4c
IC4d
IC5
IC1
IC2
IC3
Frequency
S1
Z
Y
X
A
B
C
D
C14 0.001µF
C15 0.0015µF
C16 0.0022µF
C17 0.001µF
C18 0.0015µF
C19 0.0022µF
C20 0.001µF
C21 0.0015µF
C22 0.0022µF
C23 330pF
C24 0.12µF
C25 0.12µF
C26 0.12µF
C27 0.12µF
C28 0.12µF
R1 22.1kΩ
R2 10Ω
R3 22.1KΩ
R4 10KΩ
R5 10KΩ
R6 10KΩ
R7 10KΩ
R8 10KΩ
R9 4.75KΩ
R10 348Ω
R11 4.75KΩ
R12 10Ω
R13 1KΩ
R14 1KΩ
R15 348Ω
R16 75Ω
R17 475Ω
R18 475Ω
P1 10KΩB
Reduction
In
S3
LED1
LED2
LED3
X10
S2
NC
Gain Trim
TR1 50KΩ
C3 3.3µF
C4 3.3µF
C5 0.12µF
C6 0.12µF
C7 68pF
C8 0.1µF
C9 0.12µF
C10 0.12µF
C11 0.12µF
C12 10µF NP
C13 10µF NP
AOI1
AOI2
CR1
CR2
C1 10µF
C2 10µF
- In
+ In
+V
-V
Common
Chassis
+ Out
- Out