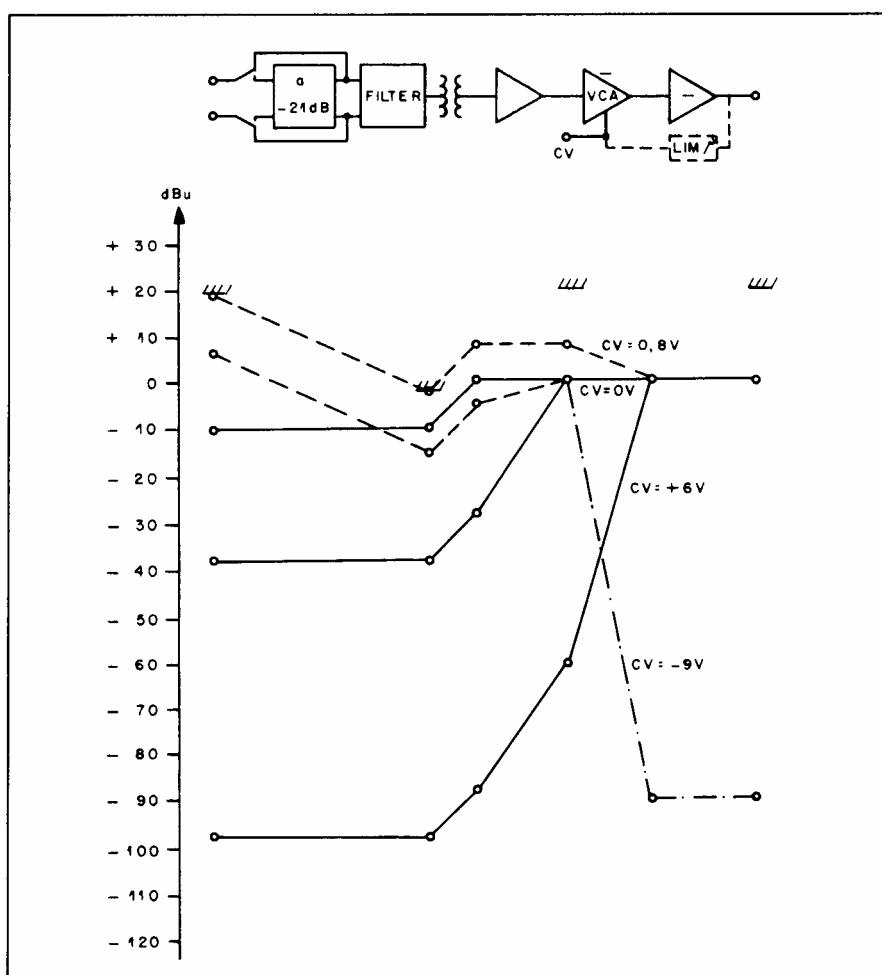
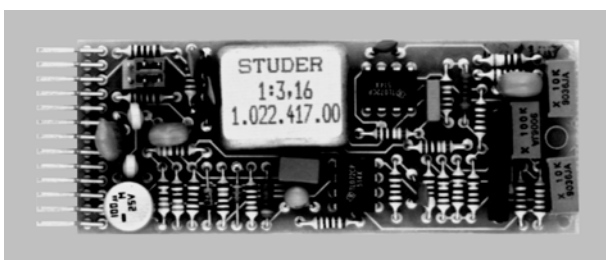


Microphone Amplifier with Limiter

1.914.539

This assembly combines a microphone amplifier and a VCA limiter circuit with adjustable threshold level and program-depending release time. The input is balanced and floating, the output is unbalanced and with low impedance. Gain control is effected internally with a trimmer potentiometer, or externally with a gain-control DC voltage. A jumper-selectable pad reduces the input level by 21 dB.

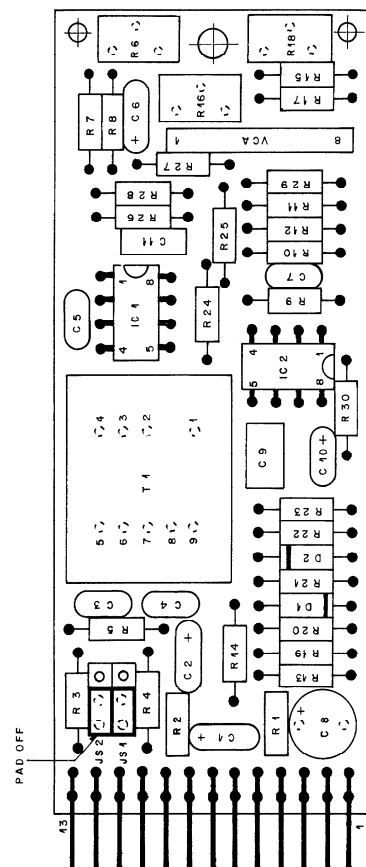
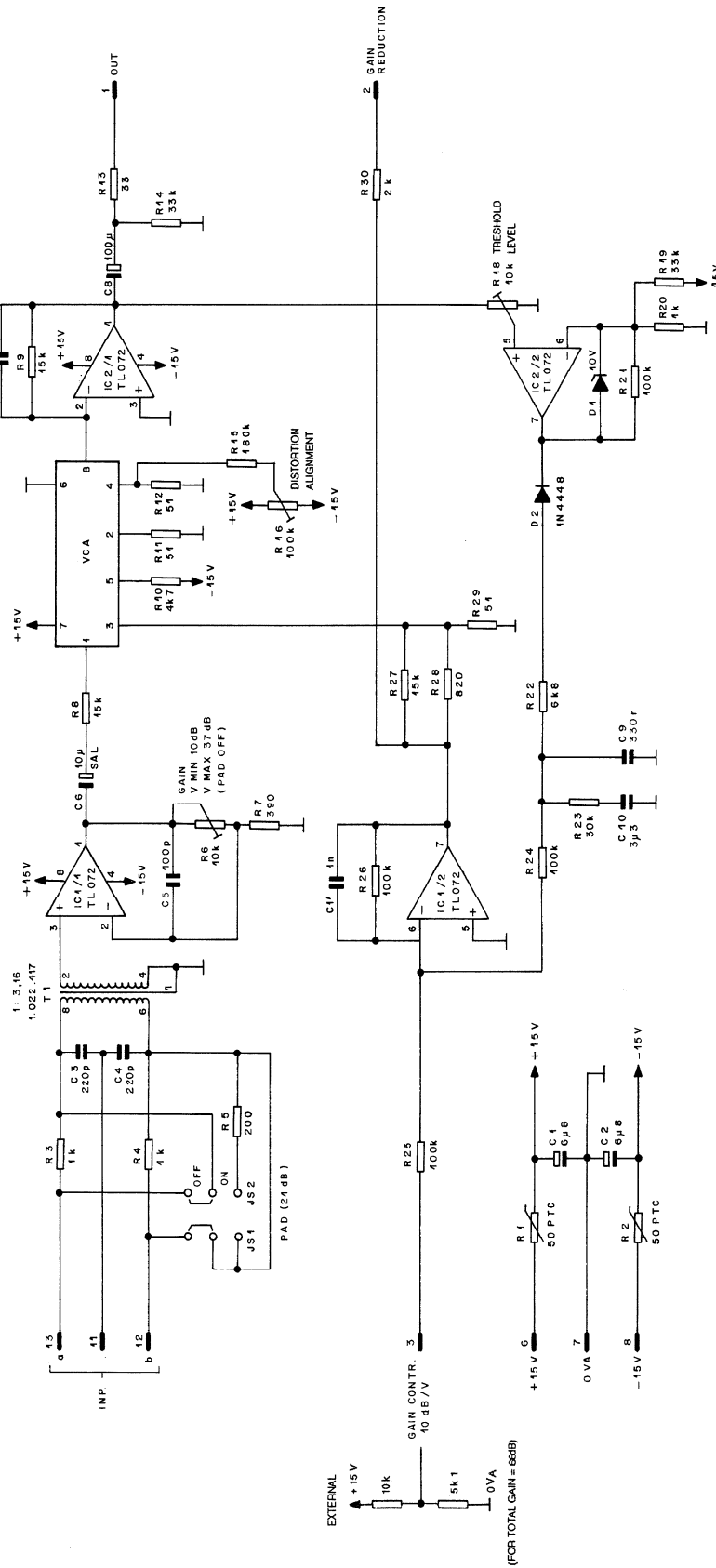


The operation of the limiter circuit can be monitored at the gain reduction output, if an appropriate instrument (GRM) is connected.

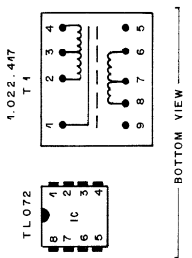
This card is ideally suited for talkback applications.

Technical Specifications

Input:	Impedance	> 1 kΩ , balanced, floating
	Max. level	-2 dBu (THD at 30 Hz \leq 1%) +19 dBu , pad on
	Pad (attenuation)	-21 dB , jumper-selectable
	CMRR	> 60 dB @ 16 kHz
	Source impedance	\leq 200 Ω
Output:	Max. level	+20 dBu
	Impedance	33 Ω
	Load	\geq 2 kΩ
	Gain adjust (v_1)	min. +10 dB , VCA = 0 dB; pad off max. +37 dB , VCA = 0 dB; pad off min. -11 dB , VCA = 0 dB; pad on max. +16 dB , VCA = 0 dB; pad on
	Gain control characteristics (v_2)	10 dB/V
	DC range	-10...+6 V , pin3: gain control input
	Total gain	$v_{tot} = v_1 + v_2$
	Max. attenuation	> 90 dB
General:	Frequency response	± 0.5 dB , 30 Hz...16 kHz
	THD	\leq -50 dB , 20 dB gain; 30 Hz...16 kHz
	Noise voltage	-95 dBu , pad on; 0 dB gain
	Noise figure	F ~ 10 dB , bandwidth = 23 kHz; 60 dB gain; $R_s = 200 \Omega$; pad off
Limiter:	Threshold level	-7...+20 dBu
	Attack time	0.5 ms
	Release time	50 ms...1 s , program-dependent
	Compression ratio	10:1 @ 1 kHz
Supply:		± 15 V (25 mA)
Ordering Information:	Microphone amplifier with limiter	1.914.539.xx



CIS	PIN	EURO 32 PIN
IN a	13	1
IN b	42	2
IN L	41	3
	40	4
	9	5
	8	6
	7	7
	6	8
	5	9
	4	10
	3	11
	2	12
	1	13
GC	3	14
GRM	5	15
OUT	1	16



STUDER REGENSDORF ZÜRICH	MIC. AMPLIFIER WITH LIMITER	1.914.539.00
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MSC MIC AMP / LIMITER

Ad	..POS..	...REF.No...	DESCRIPTION.....	MANUFACTURER
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C.....1	59.26.2689	6.8 uF	16V	SAL	
C.....2	59.26.2689	6.8 uF	16V	SAL	
C.....3	59.34.4221	220 pF	63V	CER	5%
C.....4	59.34.4221	220 pF	63V	CER	5%
C.....5	59.34.4101	100 pF	63V	CER	5%
C.....6	59.26.5100	10 uF	25V	SAL	
C.....7	59.34.4101	100 pF	63V	CER	5%
C.....8	59.22.4101	100 uF	16V	EL	
C.....9	59.06.0334	330 nF	63V	PETP	10%
C.....10	59.30.6339	3.3 uF	35V	TA	20%

C.....11	59.06.0102	1 nF	63V	PETP	10%
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D.....1	50.04.1114	BZX55-C10	Z 10V	0.4W	any
D.....2	50.04.0125	1N4448	diode		any

IC.....1	50.09.0101	TL072 CP	dual op.amp.	bifET	TI
IC.....2	50.09.0101	TL072 CP	dual op.amp.	bifET	TI
IC.....3	50.11.0140	dbx2150 A	VCA		dbx

JS....1	54.01.0021	Jumper	Au		
JS....2	54.01.0021	Jumper	Au		

MP....1	43.01.0108	ESE	ESE warning		
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P.....1	54.01.0273	13 PIN	CIS		
P.....2	54.11.0136	2*3 PIN	Stiftleiste		

PCB...1	1.914.539.11		empty PCB		St
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R.....1	57.99.0206	50 Ohm	PTC		
R.....2	57.99.0206	50 Ohm	PTC		
R.....3	57.11.3102	1 kOhm			
R.....4	57.11.3102	1 kOhm			
R.....5	57.11.3201	200 Ohm			
R.....6	58.01.9103	10 kOhm	variable resistor 10%	PGM	
R.....7	57.11.3391	390 Ohm			
R.....8	57.11.3153	15 kOhm			
R.....9	57.11.3153	15 kOhm			
R.....10	57.11.3472	4.7 kOhm			

R.....11	57.11.3510	51 Ohm			
R.....12	57.11.3510	51 Ohm			
R.....13	57.11.3330	33 Ohm			
R.....14	57.11.3333	33 kOhm			
R.....15	57.11.3184	180 kOhm			
R.....16	58.01.9104	100 kOhm	variable resistor 10%	PGM	
R.....17	57.11.3102	1 kOhm			
R.....18	58.01.9103	10 kOhm	variable resistor 10%	PGM	
R.....19	57.11.3333	33 kOhm			
R.....20	57.11.3102	1 kOhm			

R.....21	57.11.3104	100 kOhm			
R.....22	57.11.3682	6.8 kOhm			
R.....23	57.11.3303	30 kOhm			
R.....24	57.11.3104	100 kOhm			
R.....25	57.11.3104	100 kOhm			
R.....26	57.11.3104	100 kOhm			
R.....27	57.11.3153	15 kOhm			
R.....28	57.11.3821	820 Ohm			
R.....29	57.11.3510	51 Ohm			
R.....30	57.11.3202	2 kOhm			

T.....1	1.022.417.00	1:3.16	input-transformer		St
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CER = ceramic, EL = electrolytic, PETP = polyester
 SAL = solid aluminium, TA = tantal

MANUFACTURER dbx= dbx-Incorp., St= Studer, TI= Texas Instruments

1.914.539.00 MIC.AMPLIFIER WITH LIMITER HOR20/11/9000