"COMPANDER"

USER MANUAL

COMPANDER noise reduction manual

The D&R Compander noise reduction system is a single channel unit (in case of 1HE units and 9½" units) which brings professional quality noise reduction to the small studio.
The system has several features: 30dB broadband tape noise reduction and more than 10 dB increase in recorder headroom.
When recording, the unit compresses the input signal by a 2:1 ratio. During playback the system provides an exact complementary 1:2 expansion of the encoded signal.

Note:

Because of the enormeous dynamic range of the system, it is to be advised to record on a lower level as you are used to do. This is also because of frequency corrections in the compander during compression. The clip led on the compander may not light frequently, because only then you are able to make recordings that are free of distortion.

SETTING UP PROCEDURE

Connect the output of the compressor (encoder) to the input of the recorder, and the output of the recorder with the input of the expander (decoder).
Connect the output of your mixing desk with the input of the compressor and connect the output of the expander to the input of your mixing console.

ALIGNMENT

Press the bypass switch on the compander and in case of using semi-pro equipment push the -10 dBV switch. Bring a test tone signal to the input of the compander, for instance a 1 kHz tone, and adjust the input level on the recorder to the desired level. It is good practise to set it for a -6dB reading. Record the signal on tape, switch off the bypass mode on the compander and set the recorder monitor knob to play or tape. When switching the compander to bypass you may not hear any difference in level and sound on the replay mode of your tape deck. If there is a level difference adjust the replay level on your deck.
It is important that your tape deck is well aligned on the right tape brand. Remember the better the tape and the tape deck, the better the recording will be with the least side effects.

POWERING

The unit can be powered from 110V as well as 220V by setting the mains switch on the back of the unit (on 9½" units only). Some units may be set already at the factory with a fuse outside instead of a voltage selector.

We wish you a noiseless future with this D&R compander

NOTE

READ SAFETY INSTRUCTIONS VERY CAREFULLY ON THE BACK PAGE!

PRODUCT SAFETY

This product is manufactured with the highest standards and is double checked in our quality control department for reliability in the "HIGH VOLTAGE" section.

CAUTION

Never remove any panels, or open this equipment. No user servicable parts inside.
Equipment power supply must be grounded at all times.
Only use this product as described, in user manual or brochure. Do not operate this equipment in high humidity or expose it to water or other liquids.
Check the AC power supply cable to assure secure contact. Have your equipment checked yearly by a qualified dealer service center.
Hazardous electrical shock can be avoided by carefully following the above rules.

EXTRA CAUTION FOR LIVE SOUND

Ground all equipment using the ground pin in the AC power supply cable. Never remove this pin.
Ground loops should be eliminated only by use of isolation transformers for all inputs and outputs.
Replace any blown fuse with the same type and rating only after equipment has been disconnected from AC power. If problem persists, return equipment to qualified service technician

PLEASE READ THE FOLLOWING INFORMATION VERY CAREFULLY.

Especially in sound equipment on stage the following information is essential to know.
An electrical shock is caused by voltage and current, actually it is the current that causes the shock.
In practise the higher the voltage the higher the current will be and the higher the shock.
But there is another thing to consider and it is resistance. When the resistance in Ohms is high between two poles, the current will be low and vica versa.
All three of these; voltage, current, and resistance are important in determining the effect of an electrical shock.
However, the severity of a shock primarily determined by the amount of current flowing through a person.
A person can feel a shock because the muscles in a body respond to electrical current and because the heart is a muscle it can affect, when the current is high enough. Current can also be fatal when it causes the chest muscles to contract and stop breathing. At what potential is current dangereous.
Well the first feeling of current is a tingle at 0.001 Amp of current. The current between 0.1 Amp and 0.2 Amp is fatal.
Imagine that your home fuses of 20 Amp can handle 200 times more current than is necessary to kill. How does resistance affect the shock a person feels. A typical resistance between one hand to the other in "dry" condition could well over 100,000 Ohm.

If you are playing on stage your body is perspiring extensively and your body resistance is lowered by more than 50%. This is a situation in which current can easily flow.

Current will flow when there is a difference in ground potential between equipment on stage and in the P.A. system. Please do check if there is any potential between the housing of the mikes and the guitarsynth amps, which will be linked by your body on stage. Imagine, a guitar in your hand and your lips close to the mike! A ground potential difference of above 10 volts is not unusual, in improperly wired buildings it can possibly be as high as 240 volts.

Allthough removing the ground wire sometimes cures a system hum, it will create a very hazardeous situation for the performing musician.
Always earth all your equipment by the grounding pin in your mains plug.
Hum loops should be only cured by propr wiring and isolation input/output transformers.

Replace fuses always with the same type and rating after the equipment has been turned off and unplugged.
If the fuse blows again you have an equipment failure, do not use it again and return it to your dealer for repair.

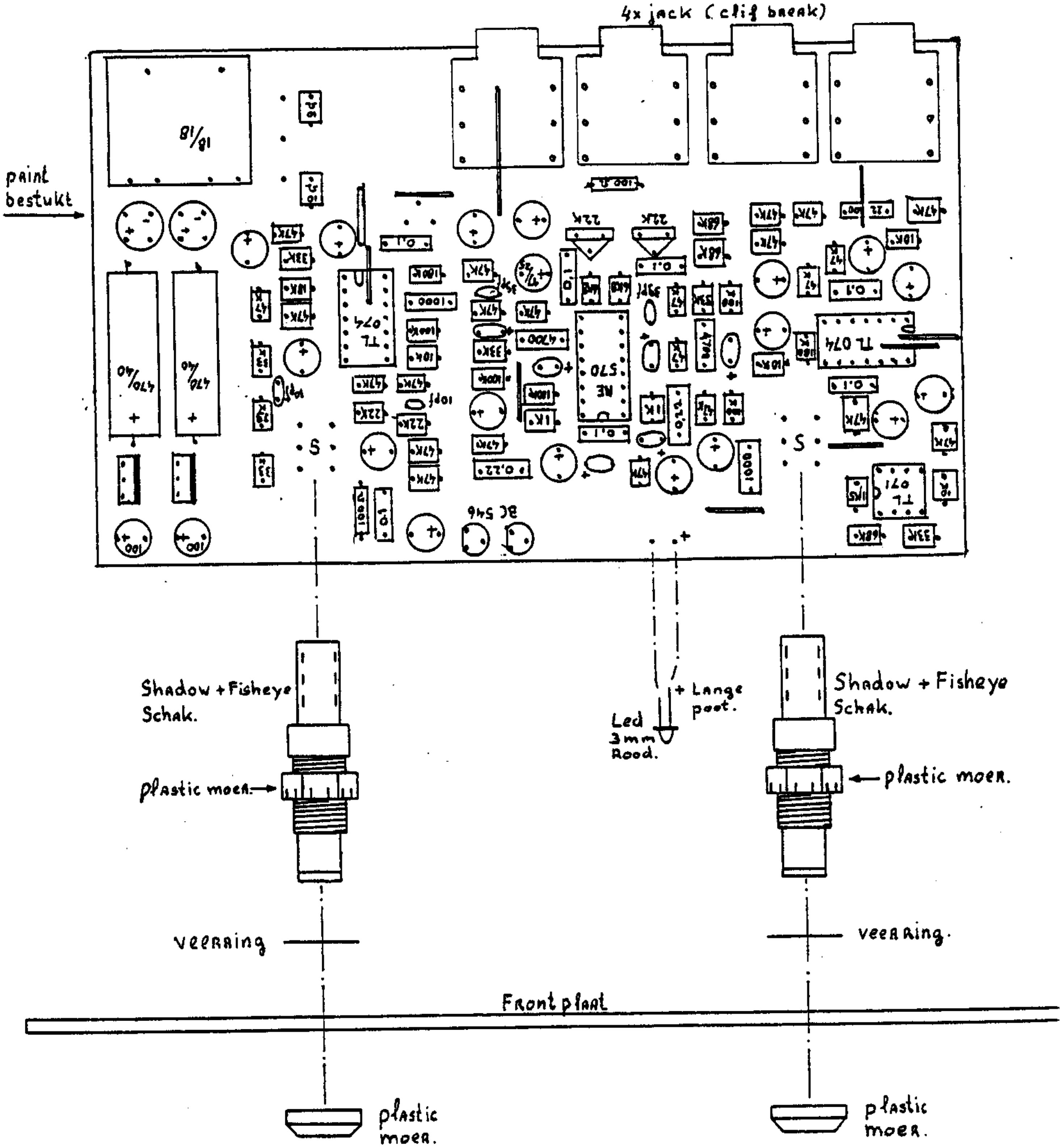
And last but not least be carefull not to touch a person being shocked as you, yourself could also be shocked.
Once removed from the shock, have someone send for medical help immediately

Aways keep the above mentioned information in mind when using electrically powered equipment.

D&R ELECTRONICA B.V. WEESP

"COMPANDER"

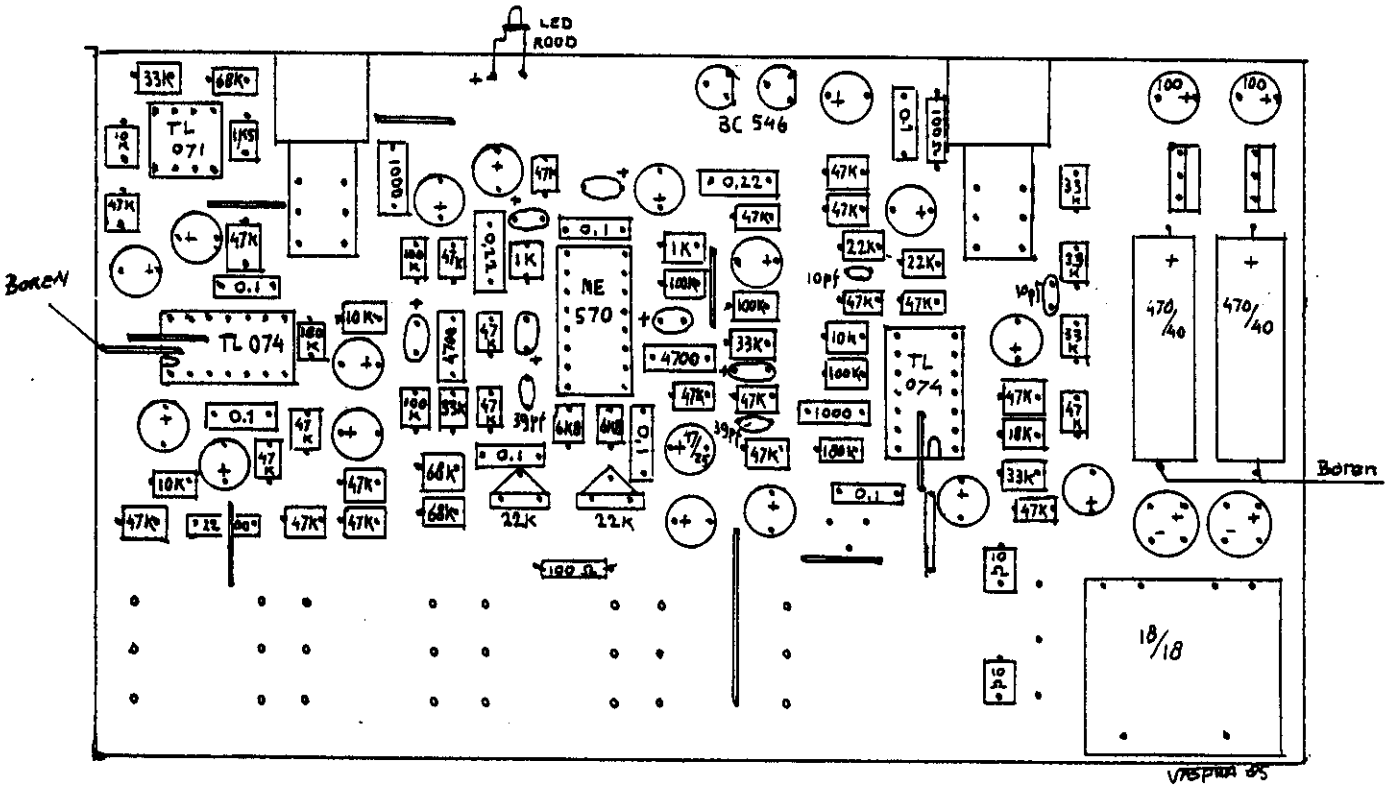
SERVICE MANUAL



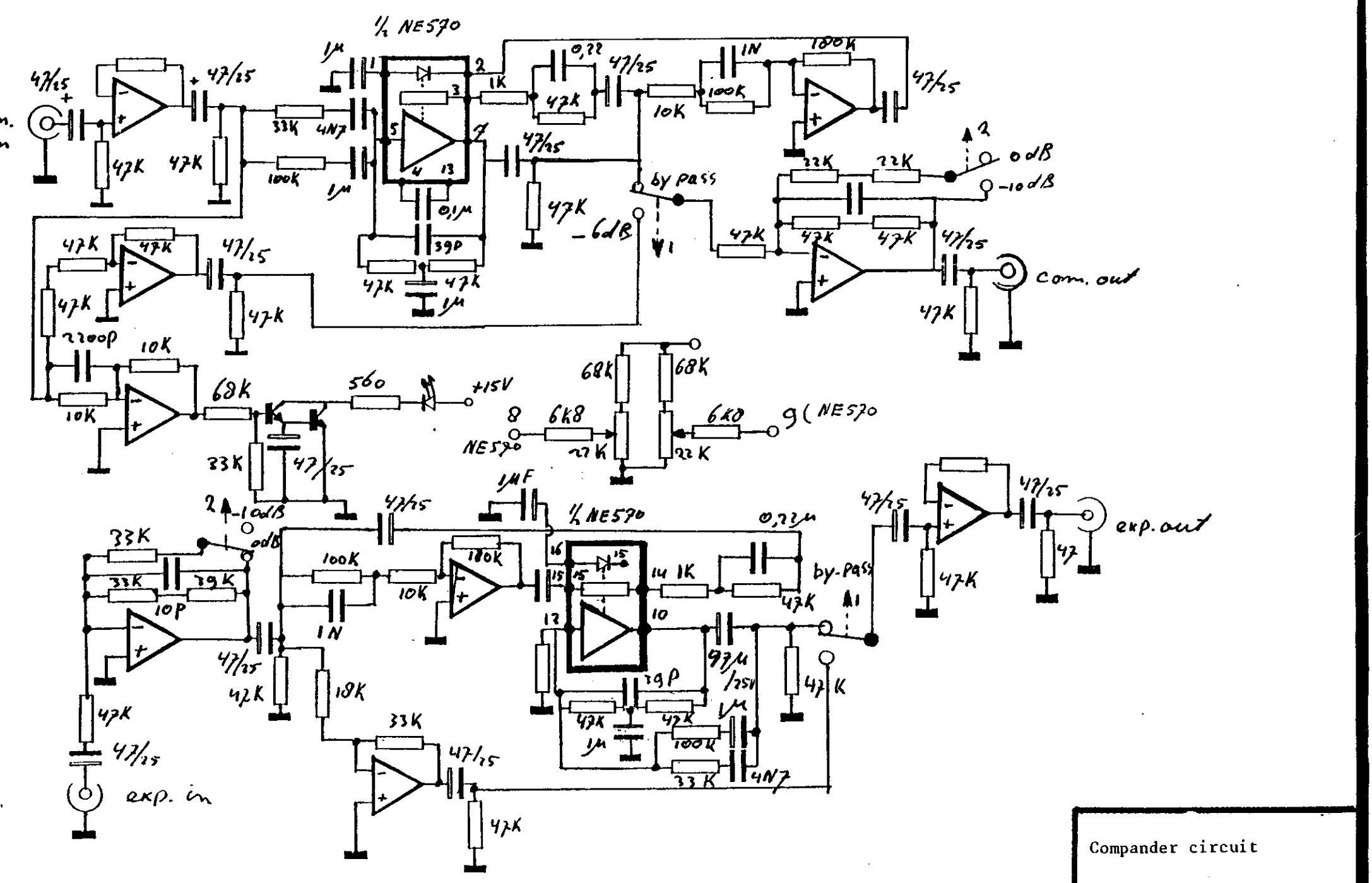
D&R Compander SHE.

COMPANDER 12-1-'85

Oude print met kleine steek. Weerstanden aan strip leveren.
Gaatje voor brug boren. 2 GAATJES VOOR ELCO'S
Baan doorfrezen bij trafo



Bruggen :		pf's :		Brugcel :		Trafo	
1 cm.	9x	39 pf	2x	B300B00	2x	18/18	1x
2,5 cm.	1x	10 pf	2x				
				Cond.:			
Weerstanden :		IC :		2200pf	1x		
33K	6x	TL o71	1x	1000pf	2x		
68K	3x	TL 074	2x	4700pf	2x		
10K	4 x	NE 570	1x	0,22	2x		
1K5	1x			0,1	7x		
47K	23x	Voetjes :					
130K	2x	8 pens	1x	Elco's :			
100K	5x	14 pens	2x	47/25	13x		
13K	1x	16 pens	1x	100/25	2x		
6K8	2x			470/40	2x		
22K	2x	Tantaal					
1K	2x	1,35	6x	Instel pot :			
39K	1x			22K	2x		
10	2x	Transistors :					
100	2x	BC 546	2x	Shadow schak.:			
		7818	2x		2x		



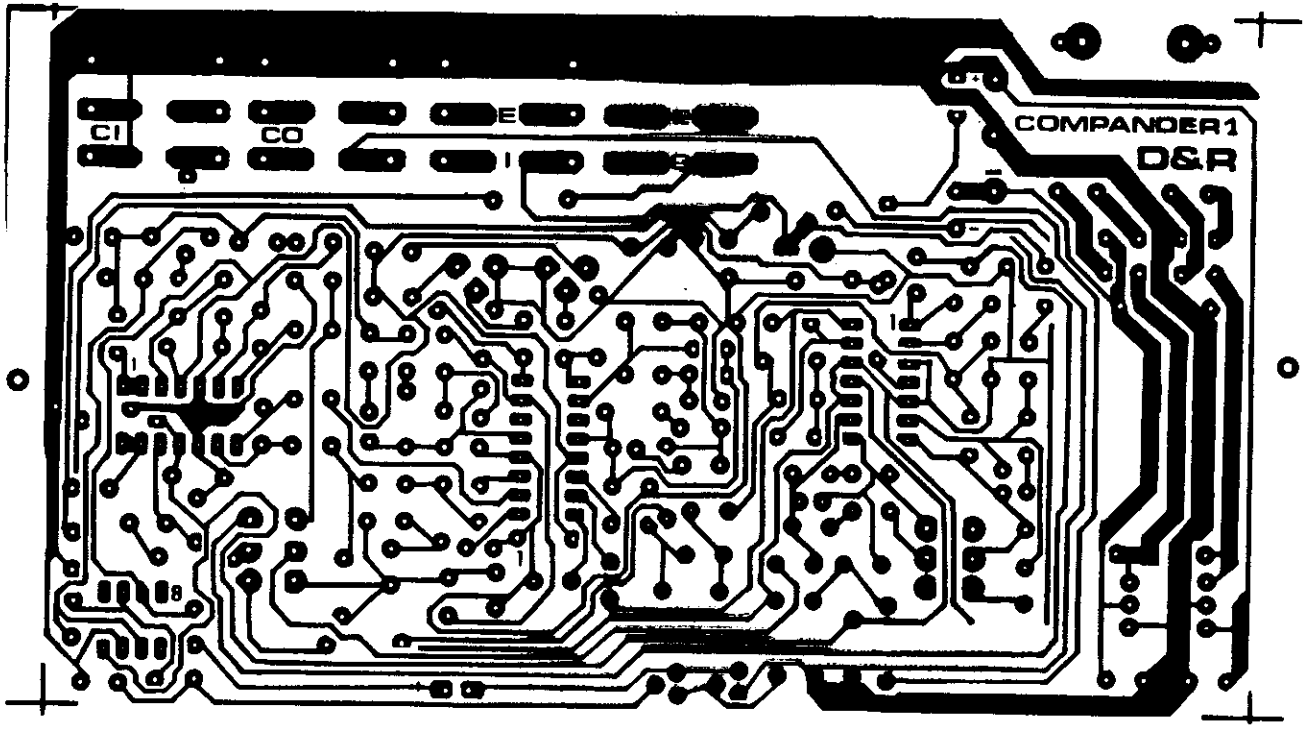
Compander circuit

Onderdelenlijst van de 9.5 compander

No.	ONDERDEEL	AANTAL	STUKSPRIJS	TOTAALPRIJS
0001	INKOOPGEGEVENS	1	0,01	0,01
0003	Front compnd9.5	1	6,60	6,60
0083	Schak.115/230V	1	6,77	6,77
0084	Isol.pl.rand.9.5	1	0,75	0,75
0093	Kast 9.5' 1HE/5	1	14,75	14,75
0146	Inst.pot 22k m	2	0,50	1,00
0199	PROD.TIJD/15min.	5	6,00	30,00
0200	TEST.TIJD/15min.	1	6,00	6,00
0213	Cond ker 10pF	2	0,05	0,10
0220	Cond ker 39pF	2	0,05	0,10
0246	Cond 1000pF pol	2	0,12	0,24
0248	Cond 2200pF pol	1	0,12	0,12
0250	Cond 4700pF pol	2	0,12	0,24
0261	Cond 0.1 uF pol	7	0,14	0,98
0264	Cond 0.22 uF pol	2	0,19	0,38
0275	Stick.out/in	2	0,08	0,16
0277	Stick.code	1	0,08	0,08
0278	Stick.decode	1	0,08	0,08
0279	Elco 1 /63	6	0,08	0,48
0287	Elco 47 /25	18	0,09	1,62
0292	Elco 100 /25	2	0,12	0,24
0295	Elco 470 /40ax	2	0,70	1,40
0303	Ic TL 071 bifet	1	0,51	0,51
0305	Ic TL 074 bifet	2	1,07	2,14
0314	Ic NE 570 cmp/ex	1	10,73	10,73
0322	Ic 7818 TO220/ 1	2	0,47	0,94
0328	BC 546/B NPN	2	0,09	0,18
0345	Brugcel BS0C1000	2	0,82	1,64
0390	Led 5x2 rood	1	0,30	0,30
0394	Ic voet 8 pins	1	0,08	0,08
0395	Ic voet 14 pins	2	0,14	0,28
0396	Ic voet 16 pins	1	0,16	0,16
0404	Schak. + Fisheye	2	4,29	8,58
0421	Stick.warning rd	1	0,08	0,08
0432	Jack cli# break	4	0,34	1,36
0438	Pri bst.compand.	1	24,00	24,00
0499	Kabel NET2ad	1	0,92	0,92
0503	Pri.compander /1	1	3,73	3,73
0570	Kartelring 12mm	1	0,10	0,10
0582	Trafo 2x18v pri	1	4,23	4,23
0642	Trekontl. Ø 11mm	1	0,10	0,10
0675	Zek.houd.isol pr	1	0,32	0,32
0678	Park.2.9x6.5zwar	8	0,06	0,48
0693	Zek. 160 mA slow	1	0,22	0,22
0694	Soldeerlip groot	1	0,33	0,33
0705	Weerst 5% 10	2	0,01	0,02
0717	Weerst 5% 100	2	0,01	0,02
0729	Weerst 5% 1k0	2	0,01	0,02
0731	Weerst 5% 1k5	1	0,01	0,01
0739	Weerst 5% 6k8	2	0,01	0,02
0741	Weerst 5% 10k	4	0,01	0,04
0744	Weerst 5% 18k	1	0,01	0,01
0745	Weerst 5% 22k	2	0,01	0,02
0747	Weerst 5% 33k	6	0,01	0,06

0748	-	Weerst 5% 39k	-	1	-	0,01	-	0,01
0749	-	Weerst 5% 47k	-	23	-	0,01	-	0,23
0751	-	Weerst 5% 68k	-	3	-	0,01	-	0,03
0753	-	Weerst 5% 100k	-	5	-	0,01	-	0,05
0756	-	Weerst 5% 180k	-	2	-	0,01	-	0,02
0924	-	Doos randaap 9.5	-	1	-	1,80	-	1,80

Kostprijs : Hfl. 135,87 Soorten art. : 60


CI
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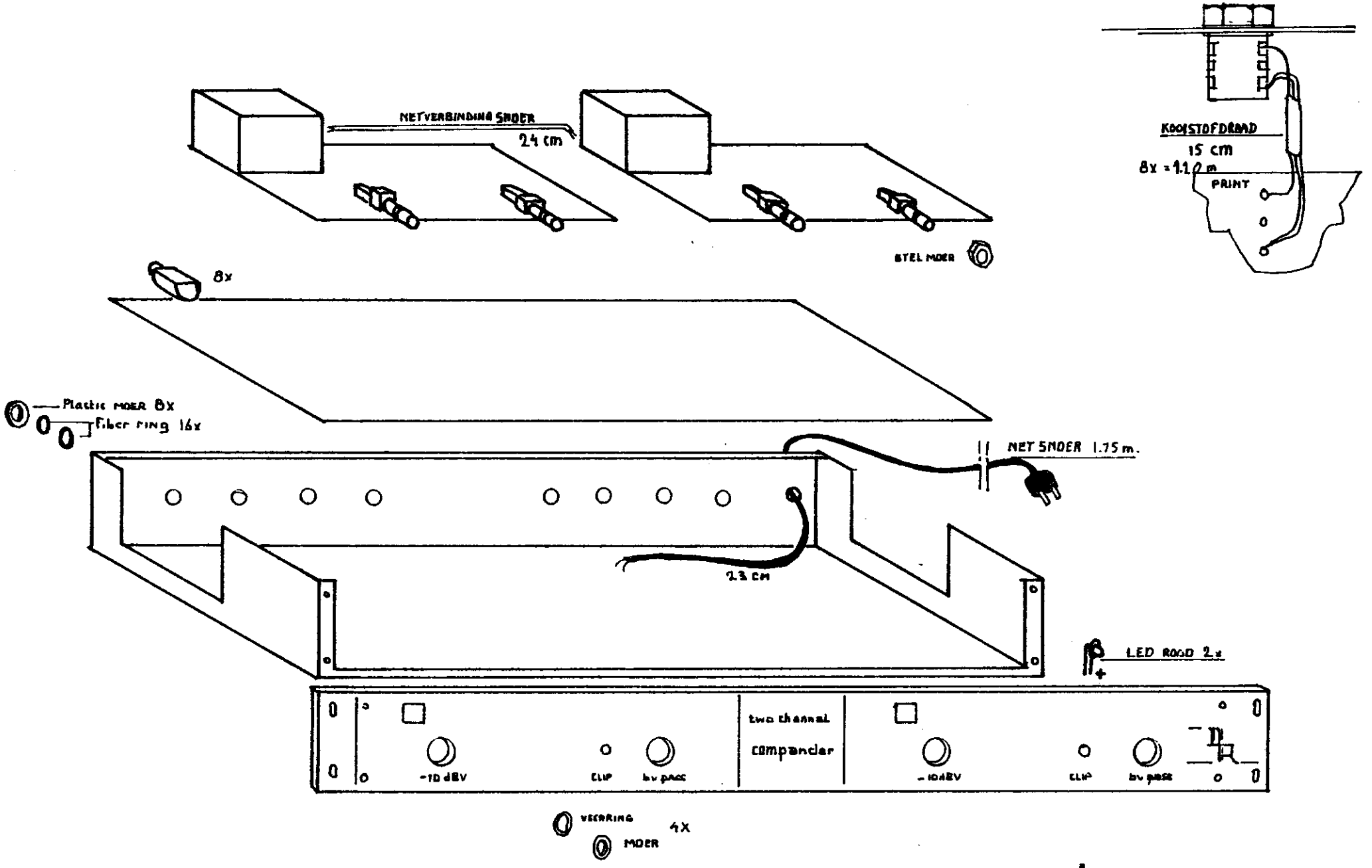
COMPANDER1
D&R



compander

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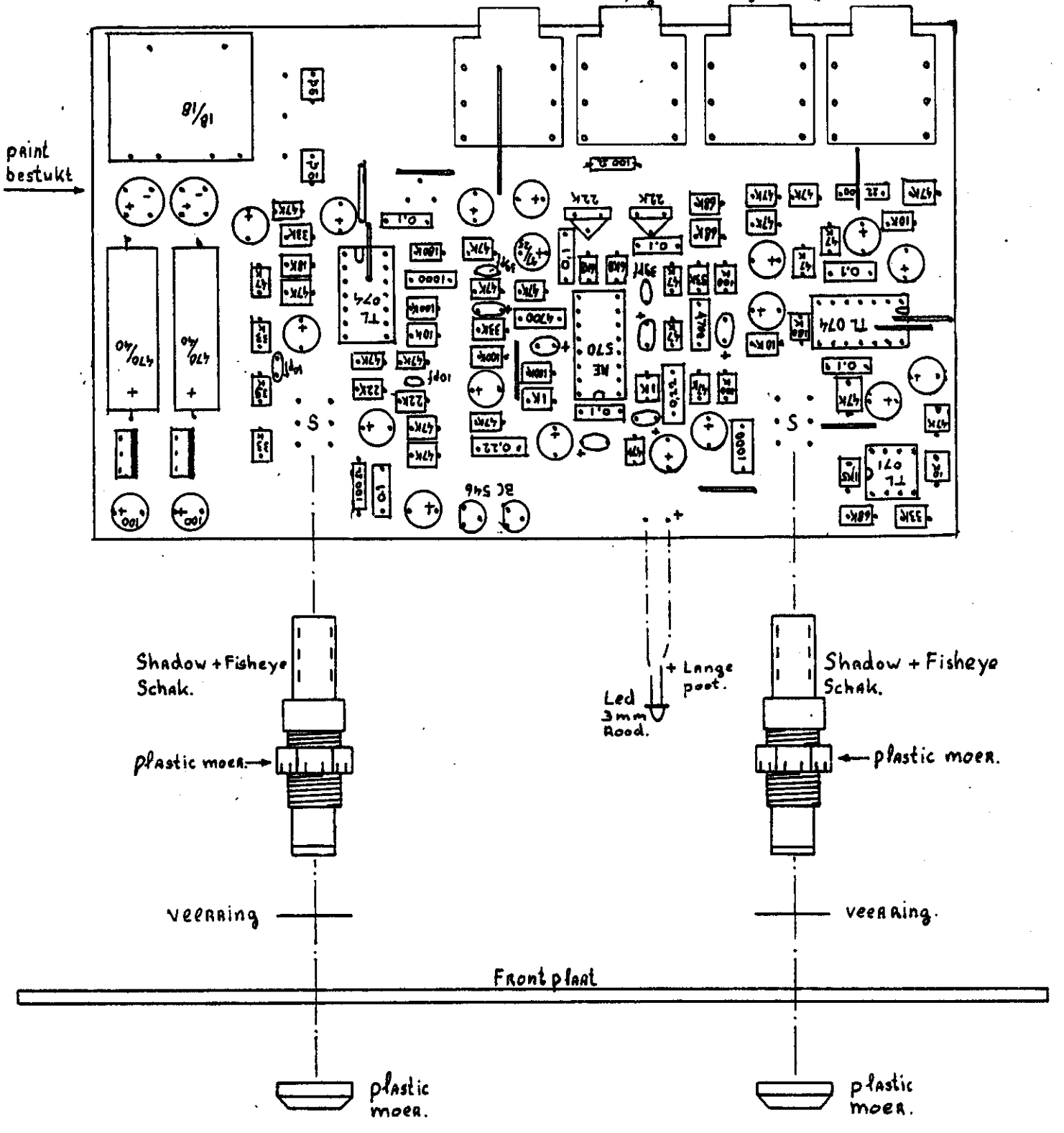
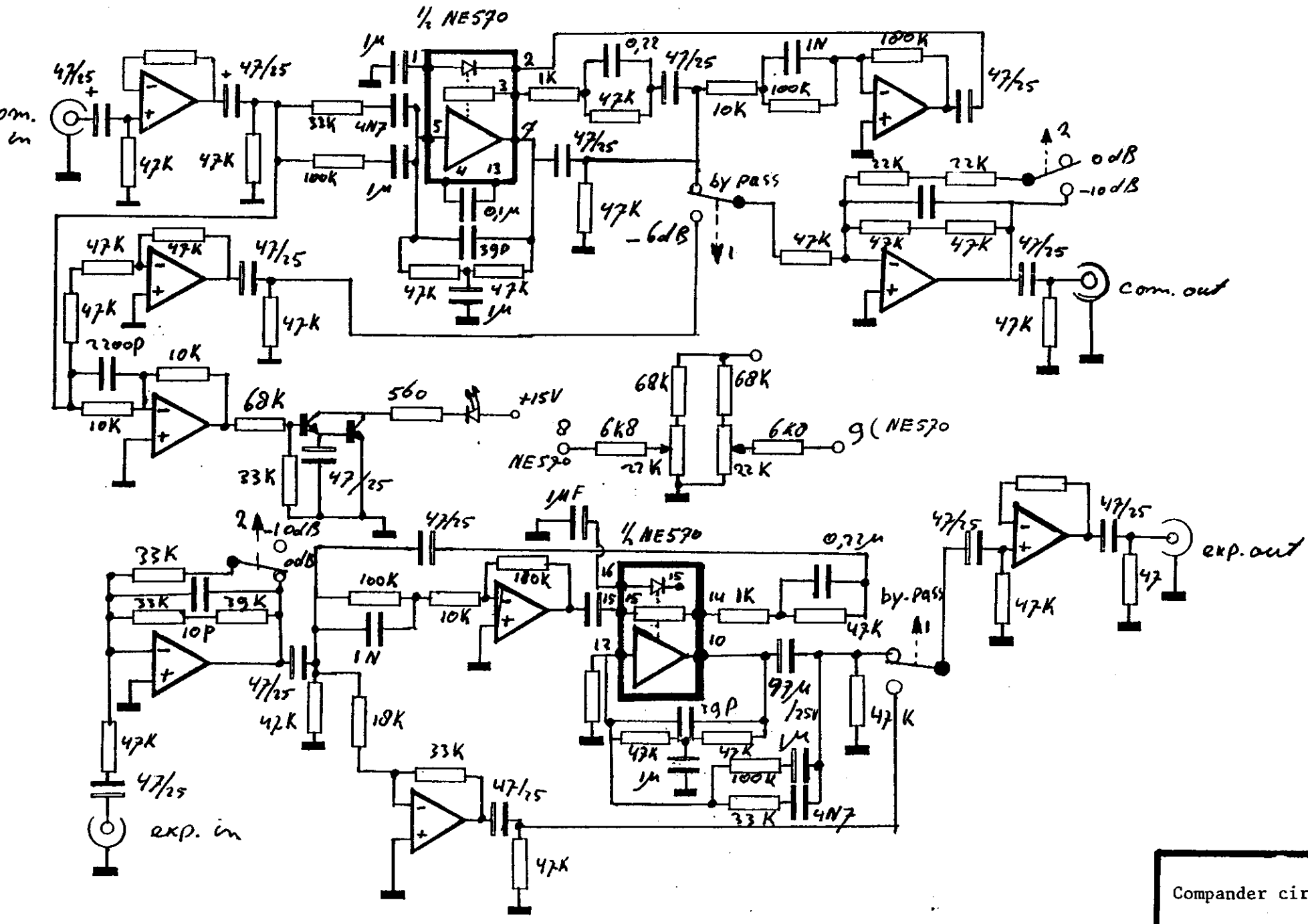
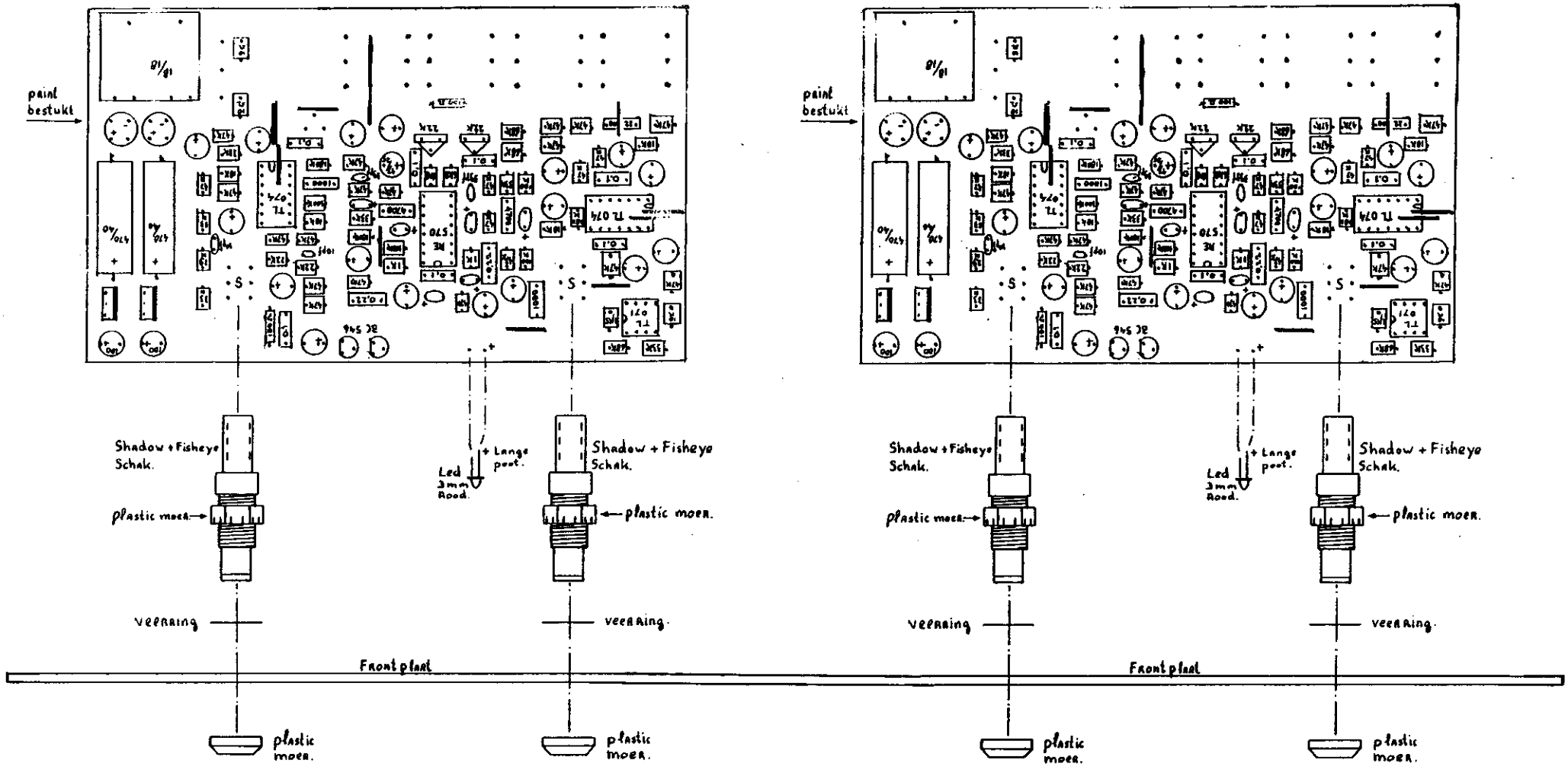


D & R Compander 5HE.



Compander circuit


paint bestukt
Shadow + Fisheye Schak.
plastic moer.
Led 3mm Rood.
+ Lange poot.
veerring
Front plaat
plastic moer.
paint bestukt
Shadow + Fisheye Schak.
plastic moer.
Led 3mm Rood.
+ Lange poot.
veerring
Front plaat
plastic moer.


-10dBV
clip
by pass
two channel
compander
-10dBV
clip
by pass

D & R Compander 19".