

Blank piece:	Material:	Treatment:	Page of
Scale : 2:1			
Tolerance :			
Design : PLJ			
Layout : 21.5.90.t1			
Revised :			
Limiter Amplifier Frontplate Lay-out			179-400E
			<b>NTP</b>
			179-4009-E-4

The use of a high quality VCA in this limiter has made possible the use of the forward regulation principle in the side chain. This in turn is the key to achieving extremely good static as well as dynamic distortion performance. The limiter may easily be tailored by the user to almost any application as limiter threshold, as well as gain is selectable on the front edge, while the programme dependant dual time constant of the recovery function may be programmed on the connector.

The compact design (EURO-bord), the balanced floating input and output, and the wide supply voltage range only add to the versatility of the design.

Pre-emphasis on threshold level (switch-

(fig. 7) able) : 50 us or off

Control voltage slope

(stereo linking voltage) : 1V/5dB Note 3.

Meter output

: 1 mA/20 dB

Meter impedance

: < 5 kOhms

Lim.led current

: approx. 10mA

Mechanical outlines

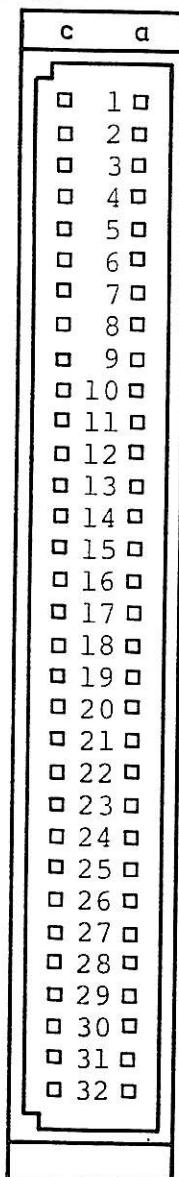
: 100 x 160 mm euroboard

Connector

: 64 pol. DIN pin conn.

A-version, broad type.

B-version, slim type.



0° }  
180° } input  
} input screen (-VCC)

C }  
B } recovery time 2  
A }

C }  
B } recovery time 1  
A }

-Vcc to recovery time switch  
Cathode Lim.led  
Anode Lim. off

0° }  
180° } output

Int.ref. (-Vcc + 9V) (Not to be used)

- } compressor meter

+ } Stereo control voltage (Ref. to pin no. 25)  
+Vcc

-Vcc

Screen

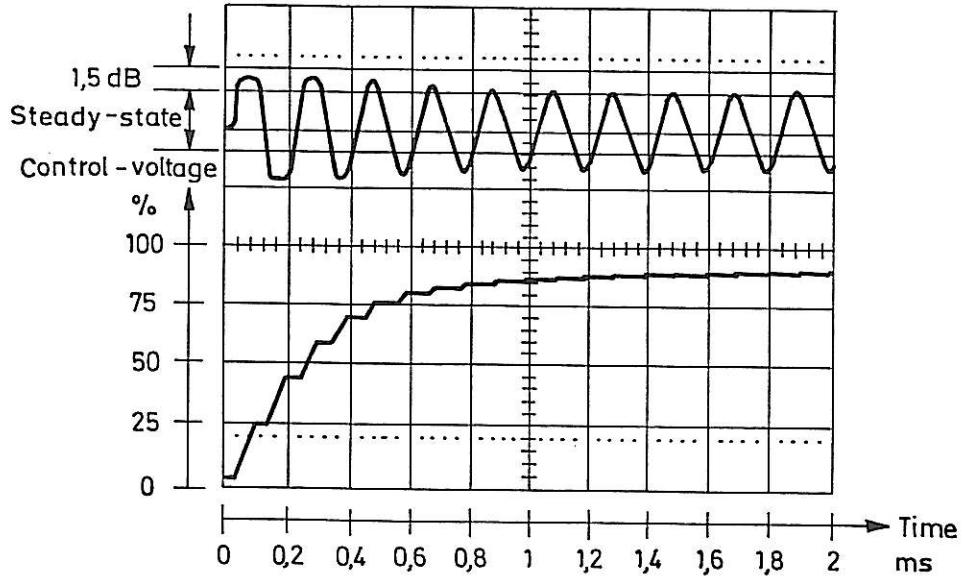
Row a and c connected in the A and E-version.

Both rows in the B and F-version connected.

Note 1:

The attack time is the period of time it takes the control voltage to reach 90% of its steady-state value, measured with 5kHz tone-bursts. Peaks shorter than 1,5 ms will be limited by a full-wave smooth clipping circuit to a value approximately 1,5dB higher than output threshold level with steady sinusodial input signal. Fig. 1.

Fig. 1: Output level and control voltage with 5 kHz tone-burst and input amplitude 10 dB above threshold level.



Note 2.

The recovery times are external switchable and follow the code below:

Recovery time 1		C	B	A
	Position			
0	fixed	1	1	1
1	fixed	1	1	0
2	100 ms	1	0	1
3	200 ms	1	0	0
4	400 ms	0	1	1
5	1 s	0	1	0
6	2 s	0	0	1
7	4 s	0	0	0

Recovery time 2		C	B	A
	Position			
0	fixed	1	1	1
1	fixed	1	1	0
2	off	1	0	1
3	1 s	1	0	0
4	2 s	0	1	1
5	4 s	0	1	0
6	10 s	0	0	1
7	20 s	0	0	0

## Logic levels:

1 = open or 15-32V, 0 = -Vcc (max. = -Vcc +3V)

Note 3.

The control voltage of two units may be linked together to obtain equal gain-reduction.



**Dual Limiter  
179-470**

**Contents:**

Technical specifications	179-4711-A-4
Terminals and Interconnections	179-4702-A-4
Schematic diagram	179-4705-A-3
Power supply      diagram	179-4730-A-4
component layout	179-4741-A-3
partslist	179-4731-A-3
Switch board      diagram	179-4732-A-4
components layout	179-4743-A-4
partslist	179-4733-A-3

Limiter 179-400, see instruction manual for 179-400.

# NTP

## General:

Supply voltage	110/220V ± 15%
Current consumption	approx. 100/50mA
Fuse	200/100mA slow
Temperature range	0-45°C ambient temperature

## Mechanical Data:

The instrument is housed in a 19 inch 1E cabinet.

Width (frontplate)	483 mm (19")
Width (cabinet)	429 mm
Depth (total)	268 mm
Depth (frontplate)	5 mm
Height	43.6 mm
Weight	4500 g

## Audio Data:

See manual for 179-400E/F.



DUAL LIMITER 179-470  
TECHNICAL SPECIFICATIONS

179-4711-A-4

General:

Supply voltage : 110/220V ±15%  
Current consumption : app. 100/50mA  
Fuse : 200/100mA slow  
Temperature range : 0-45°C ambient  
temperature

Mechanical data:

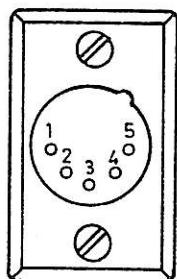
The instrument is housed in a 19-inch 1E cabinet.

Width (frontplate) : 483 mm (19")  
Width (cabinet) : 429 mm  
Depth (total) : 268 mm  
Depth (frontplate) : 5 mm  
Height : 43,6 mm  
Weight : 4500 g

Audio date:

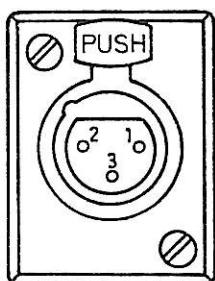
See manual for 179-400

Control voltage grouping



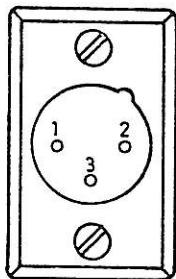
- Pin 5 NC.  
4 Control voltage left channel  
3 Control voltage right channel  
2 Control reference  
1 Shield

Input connectors

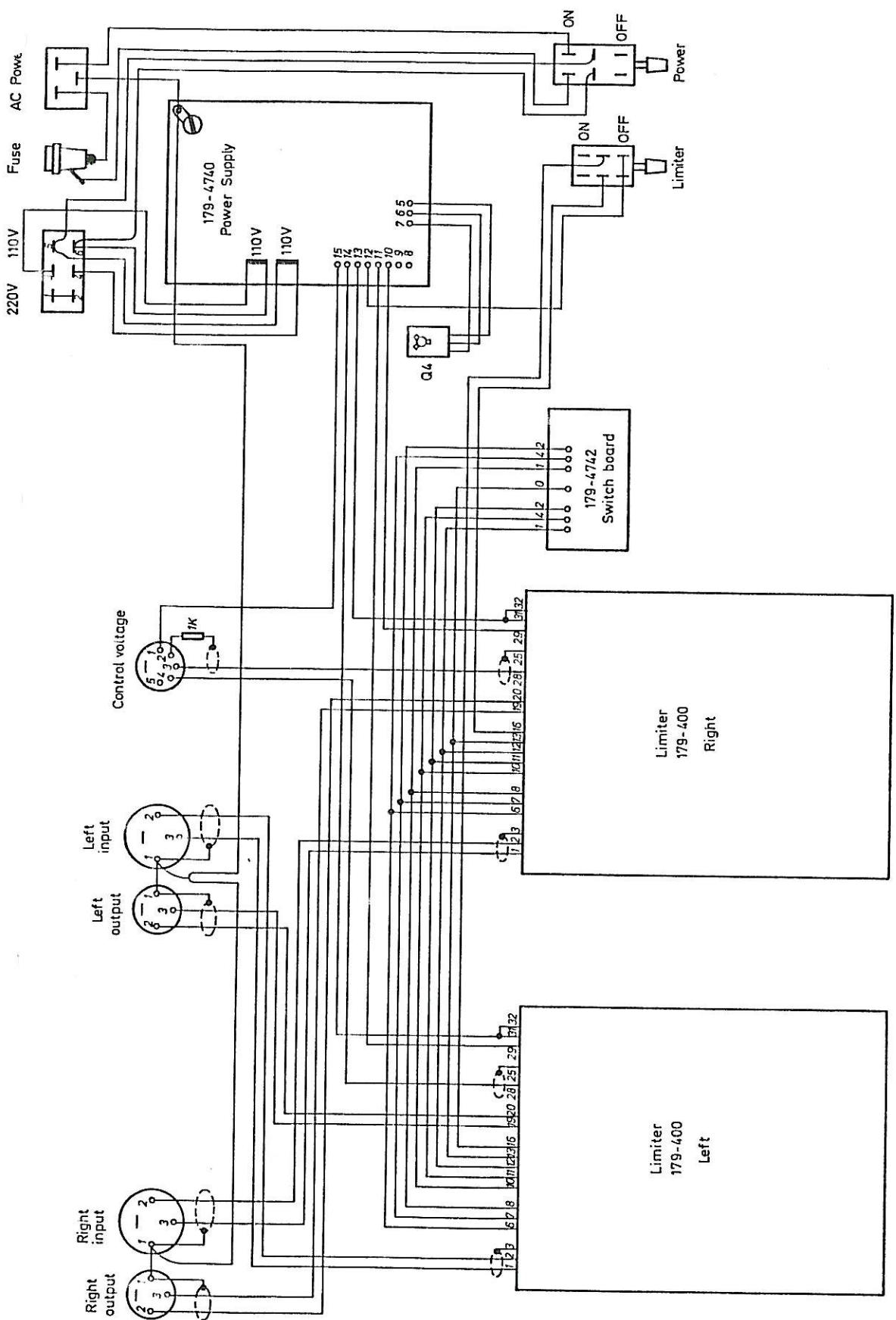


- Pin 1 Shield  
2 180° } floating input  
3 0° }

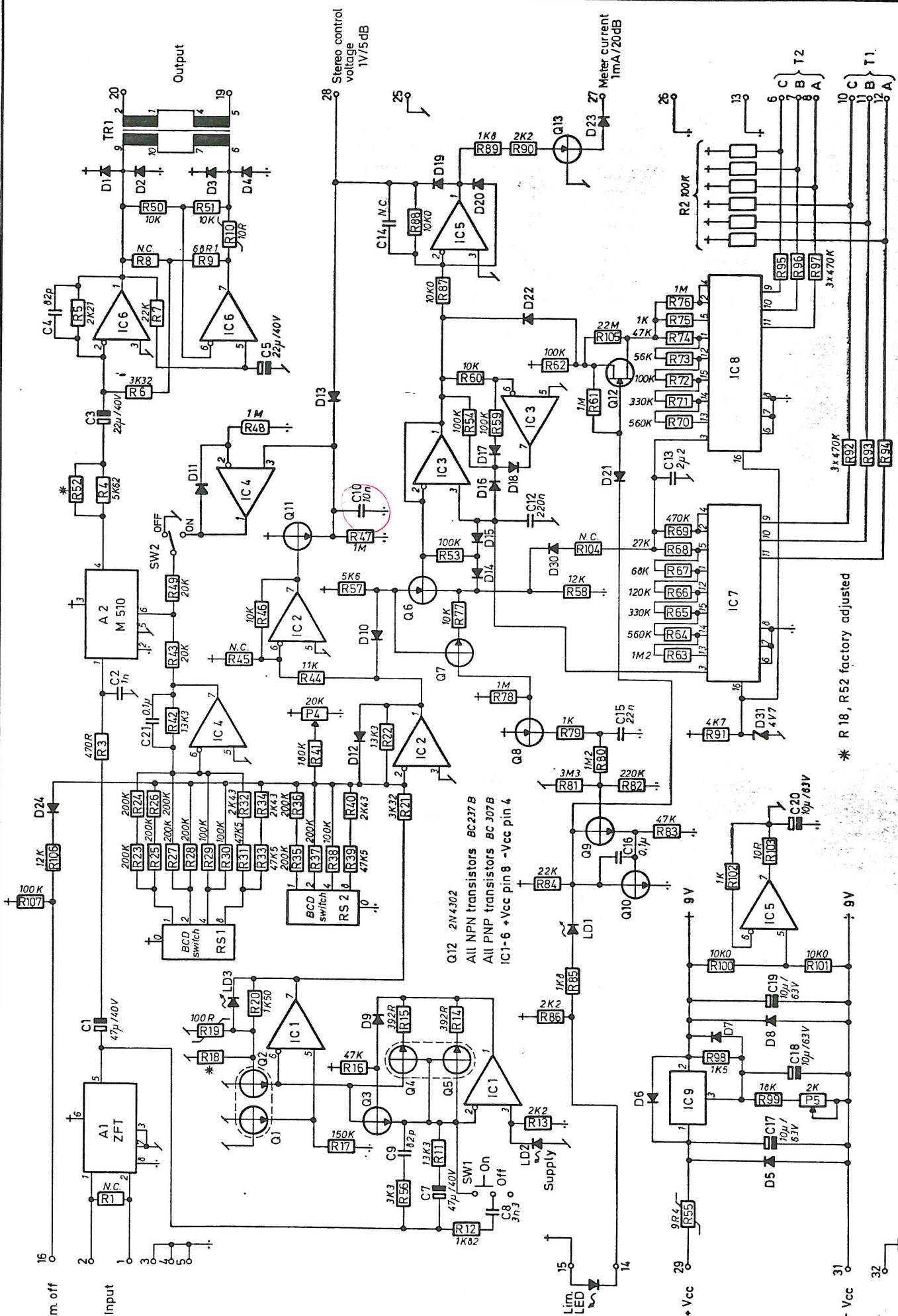
Output connectors



- Pin 1 Shield  
2 180° } floating output  
3 0° }



Pos.:	Antal:	Materiale:	Beskrift:	Det. av:
Målestok:				
Tolerans:	±	mm	Dual Limiter	179-470
Tegnat:	14.11.85	JL.	Schematic diagram	NTP ELEKTRONIK A/B
Godkndt:				
Reviderat:	3/920901			179-4705 - A-3



Malestok	
Konstruktør	P. J.
Tegnet	18.8.89.
Godkendt	:
Revideret	

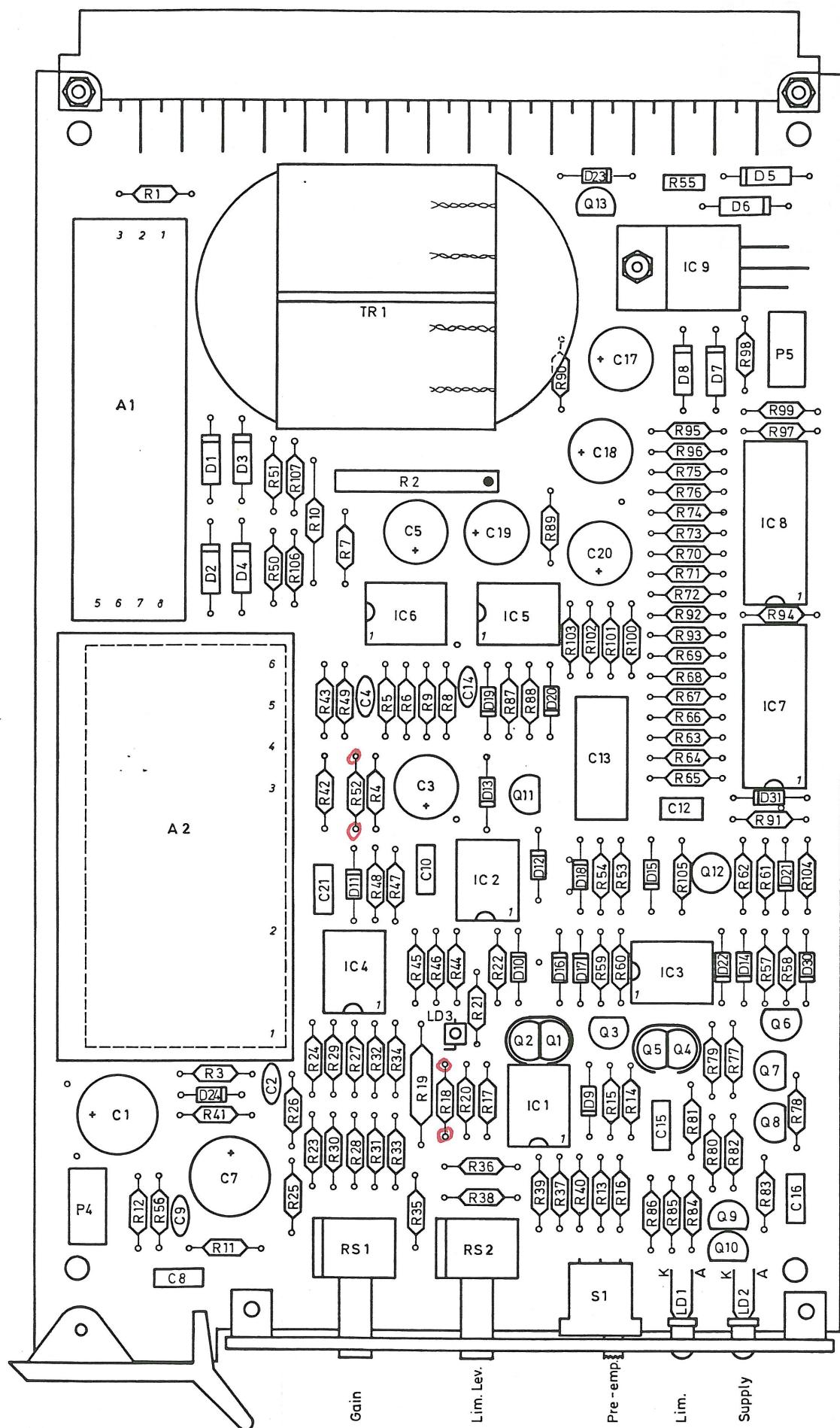
## Limiter Amplifier

### Schematic diagram

179-400 F



179-4030-E-3



Mål	: 100 x 160
Konstruktør:	P. J.
Tegnet	: 30.10.81.T.L.
Godkendt	:
Revideret	: 2

Limiter Amplifier 179-400

Components Lay-out

**NTP**  
NTP ELEKTRONIK A/S

179-4041-A-3