

FIG 2 BLOCK DIAGRAM OF A.F. & POWER SUPPLY BOARD 252-301

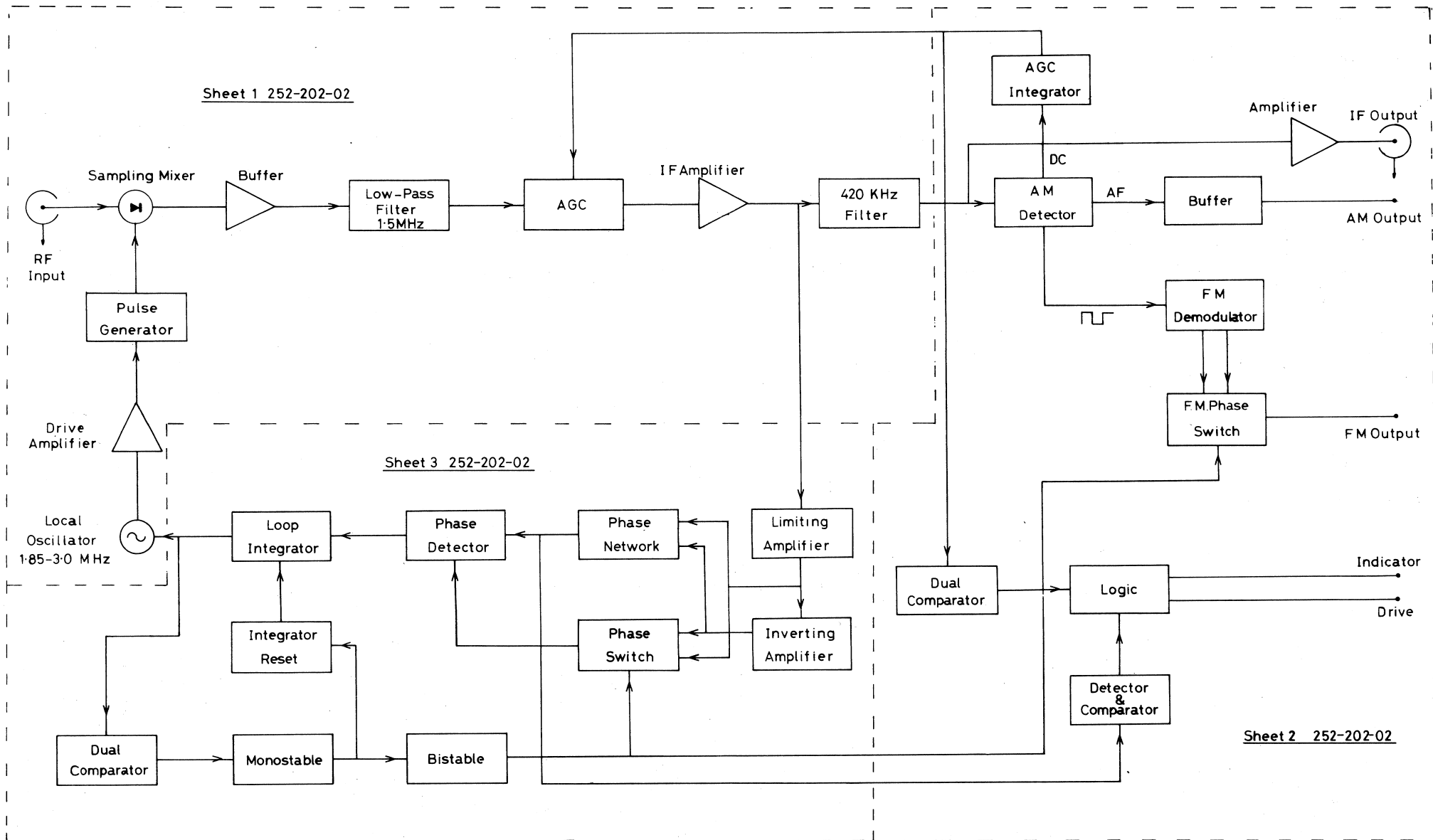
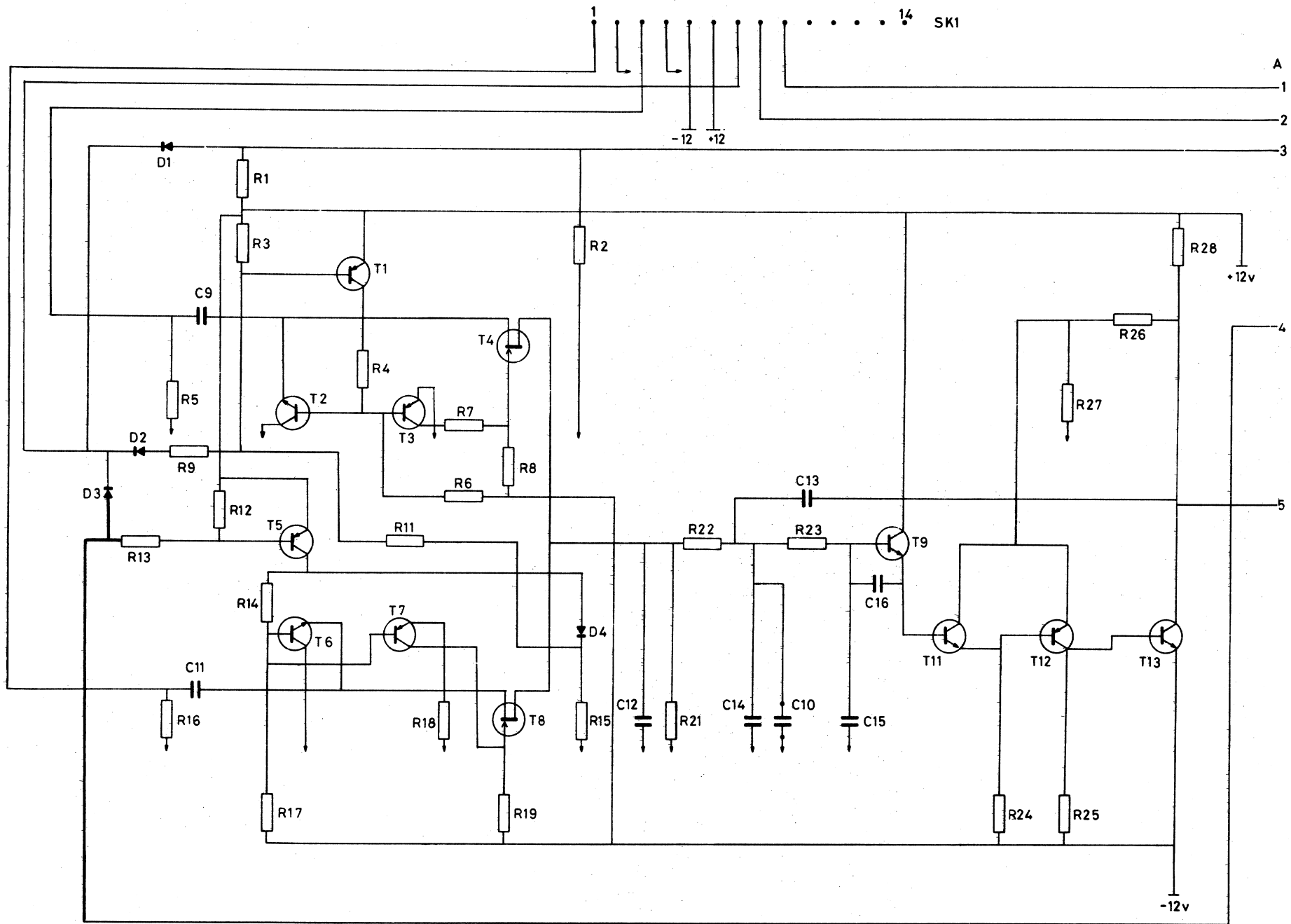


FIG.1. BLOCK DIAGRAM OF RF BOARD 252-302



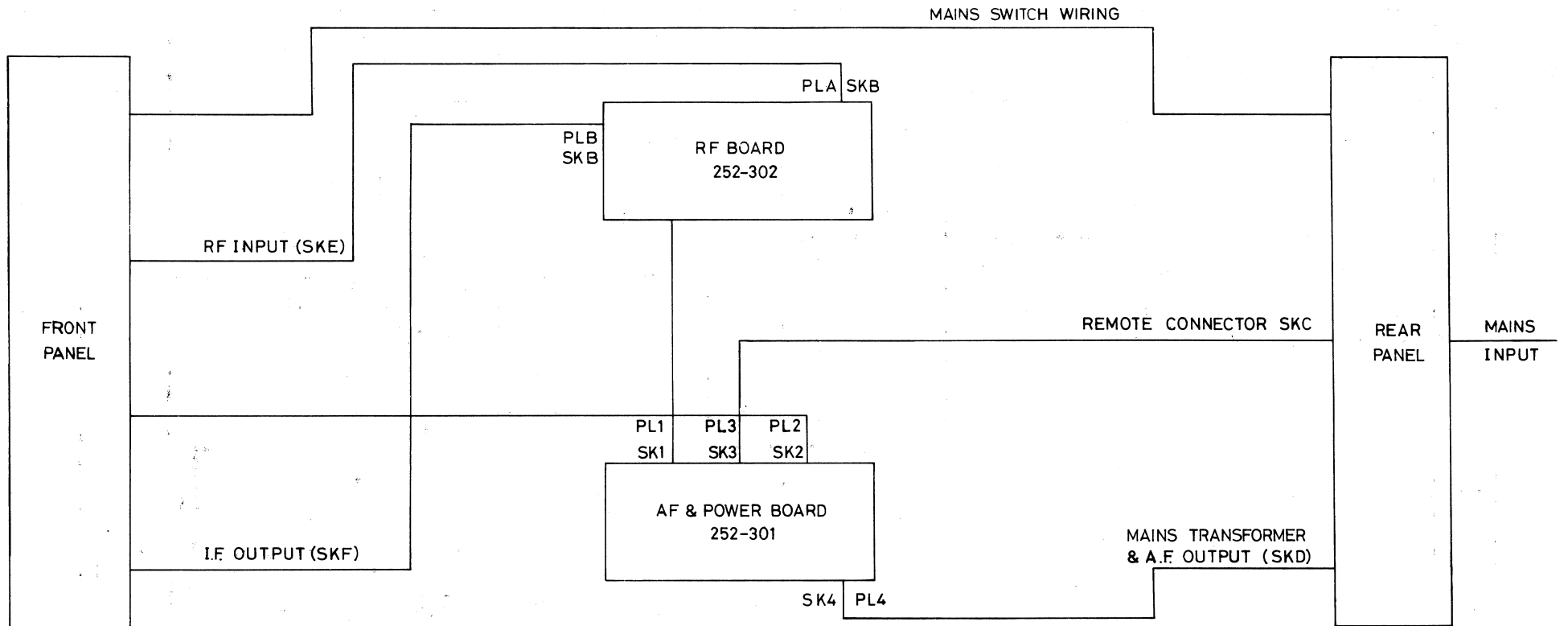
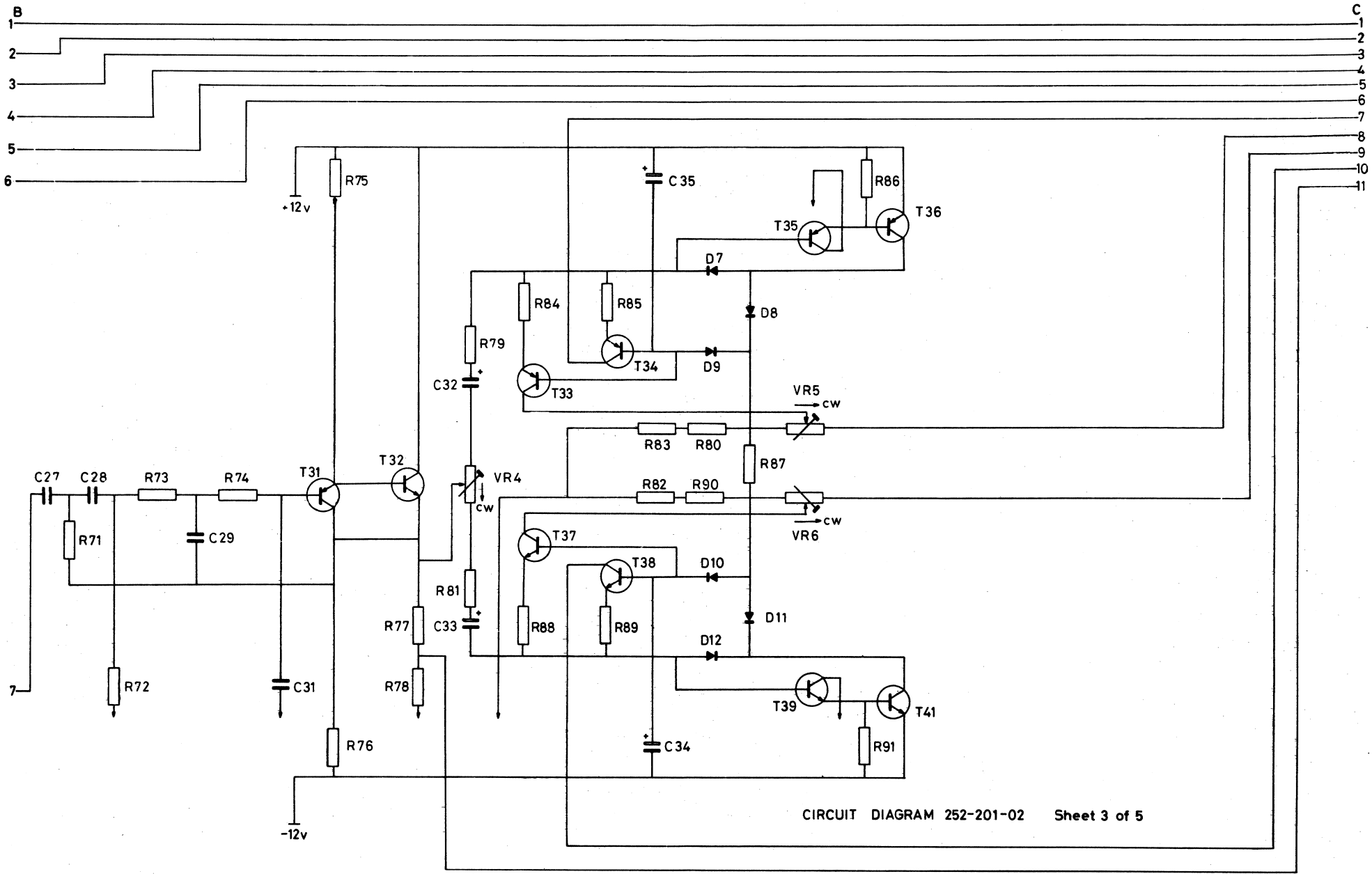
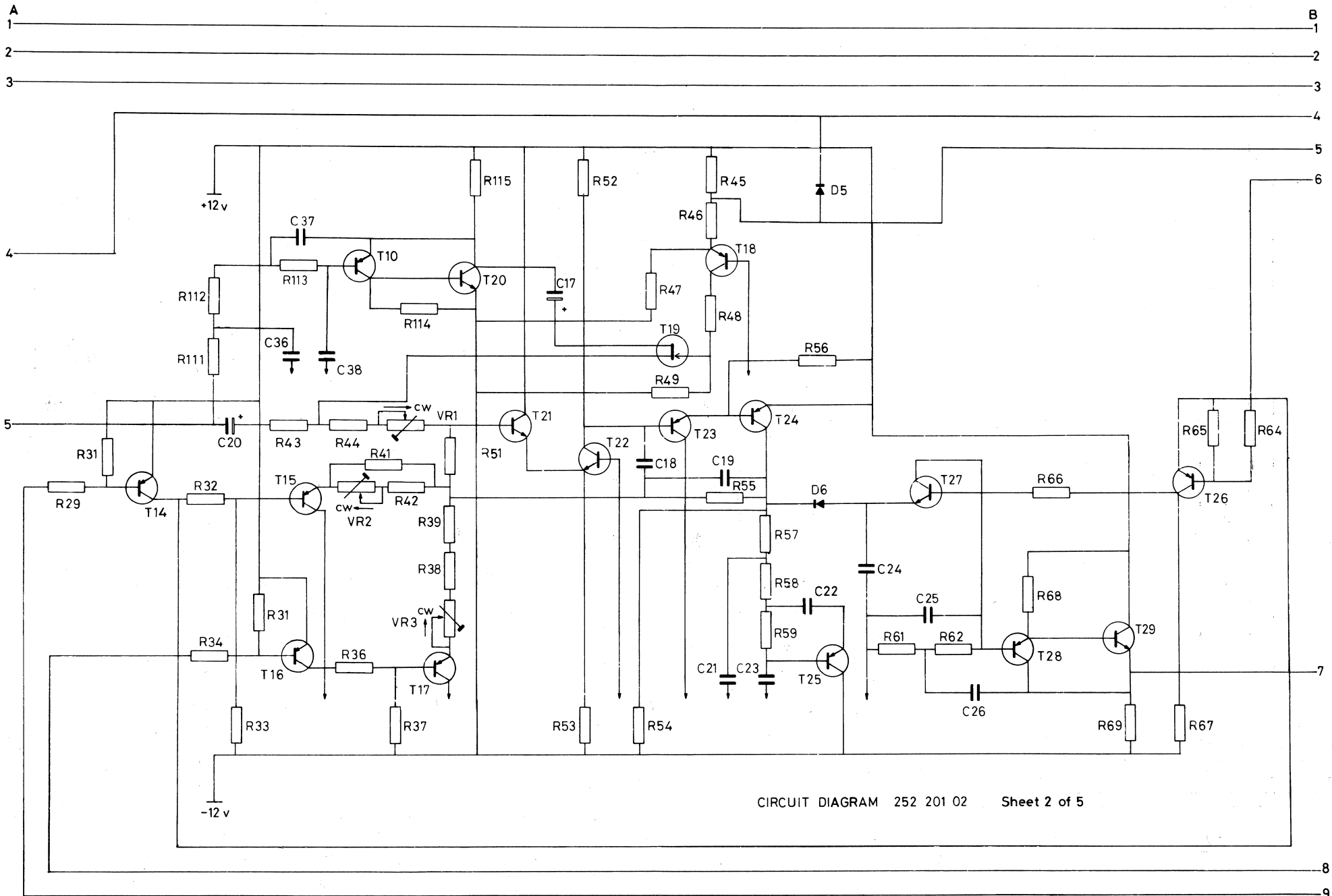


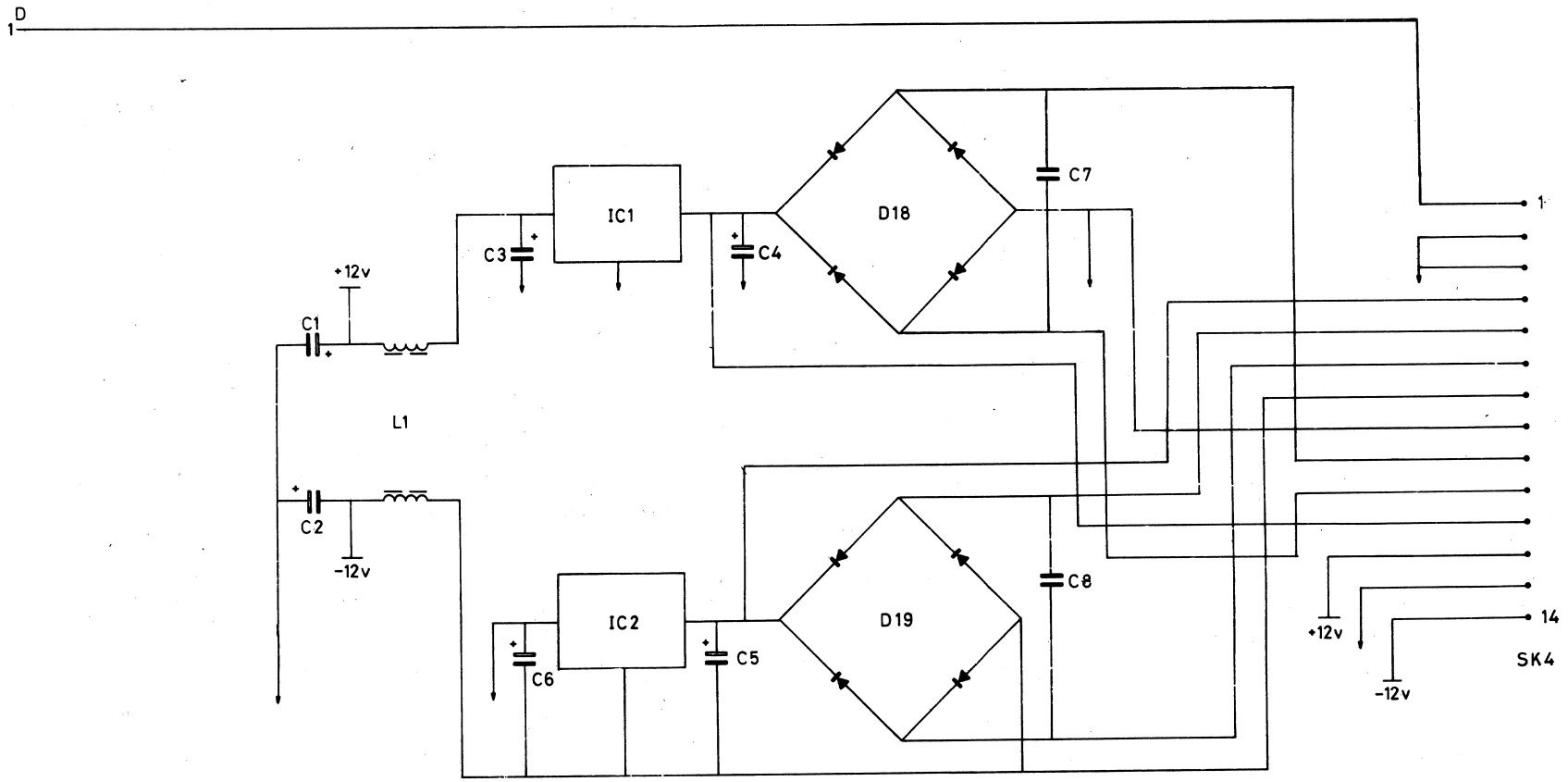
FIG.3 252 MAINFRAME BLOCK DIAGRAM

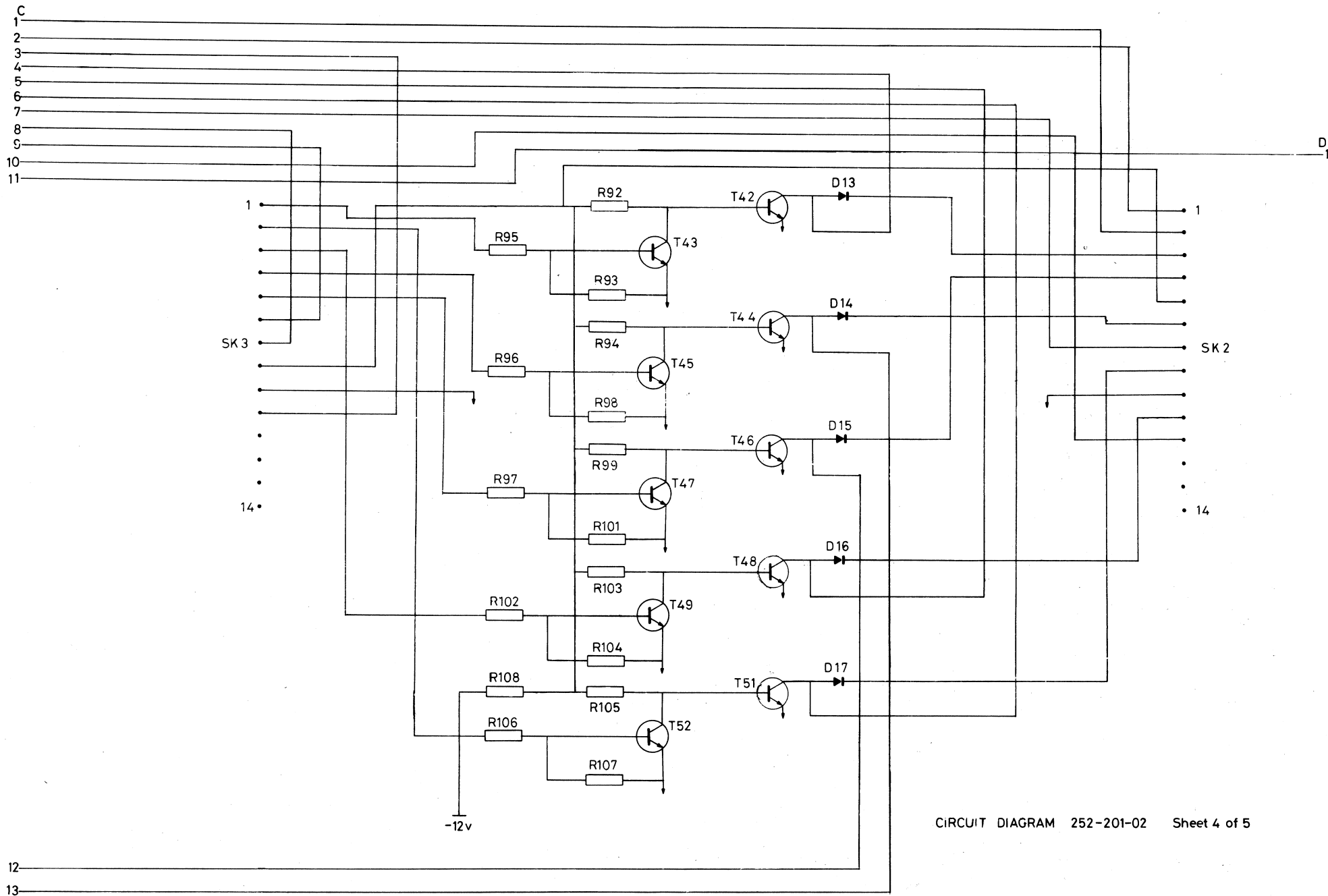


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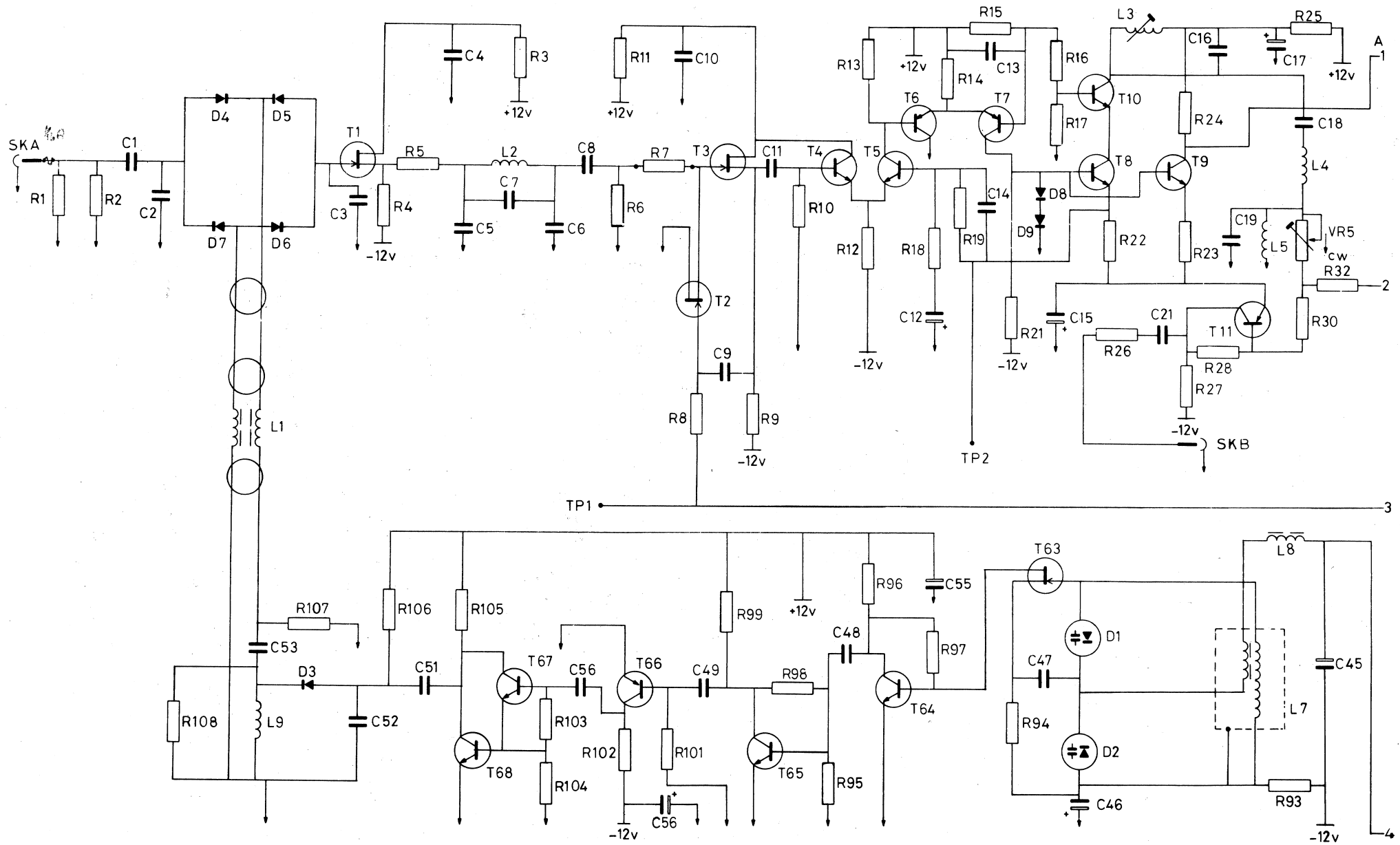


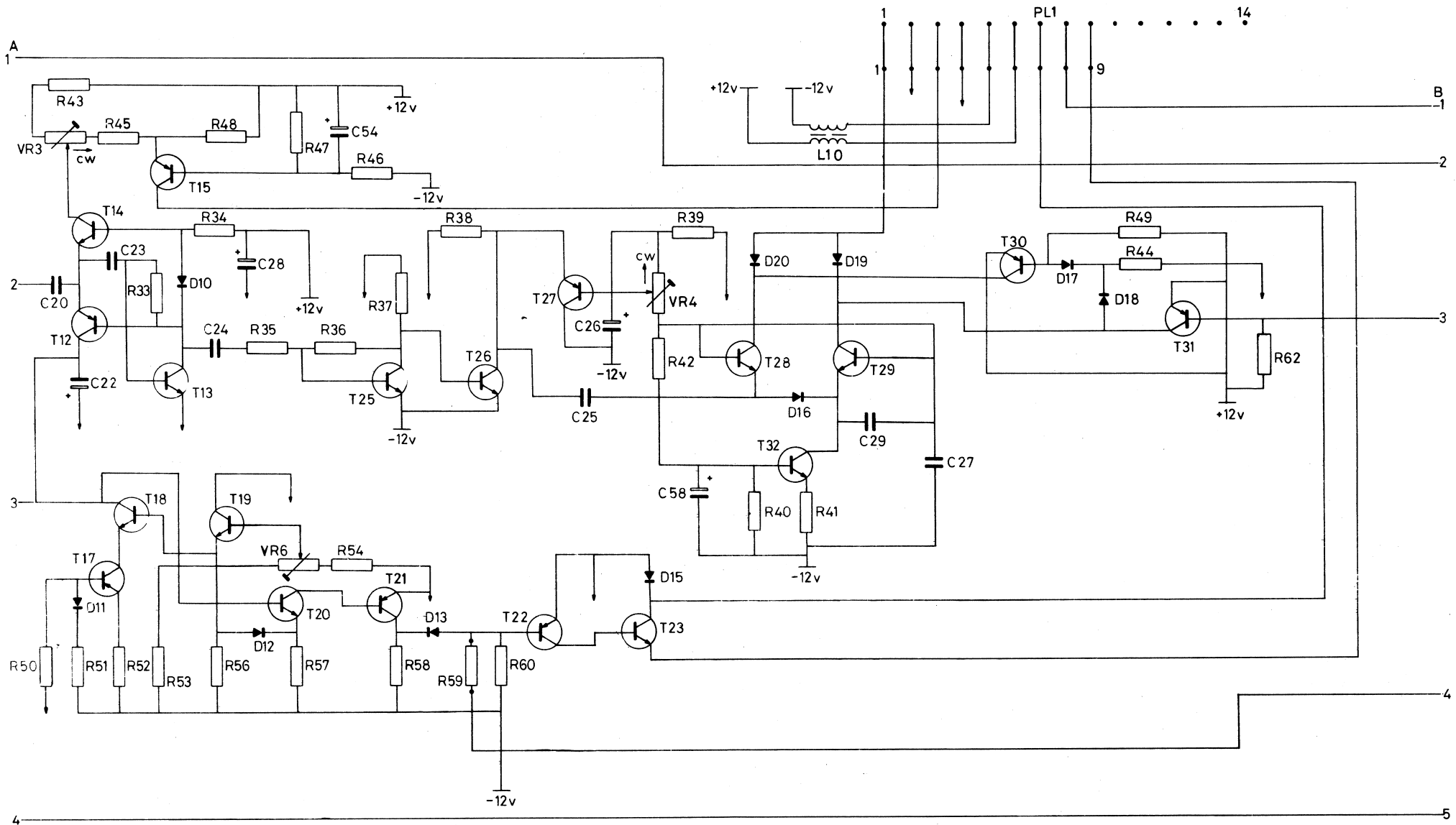
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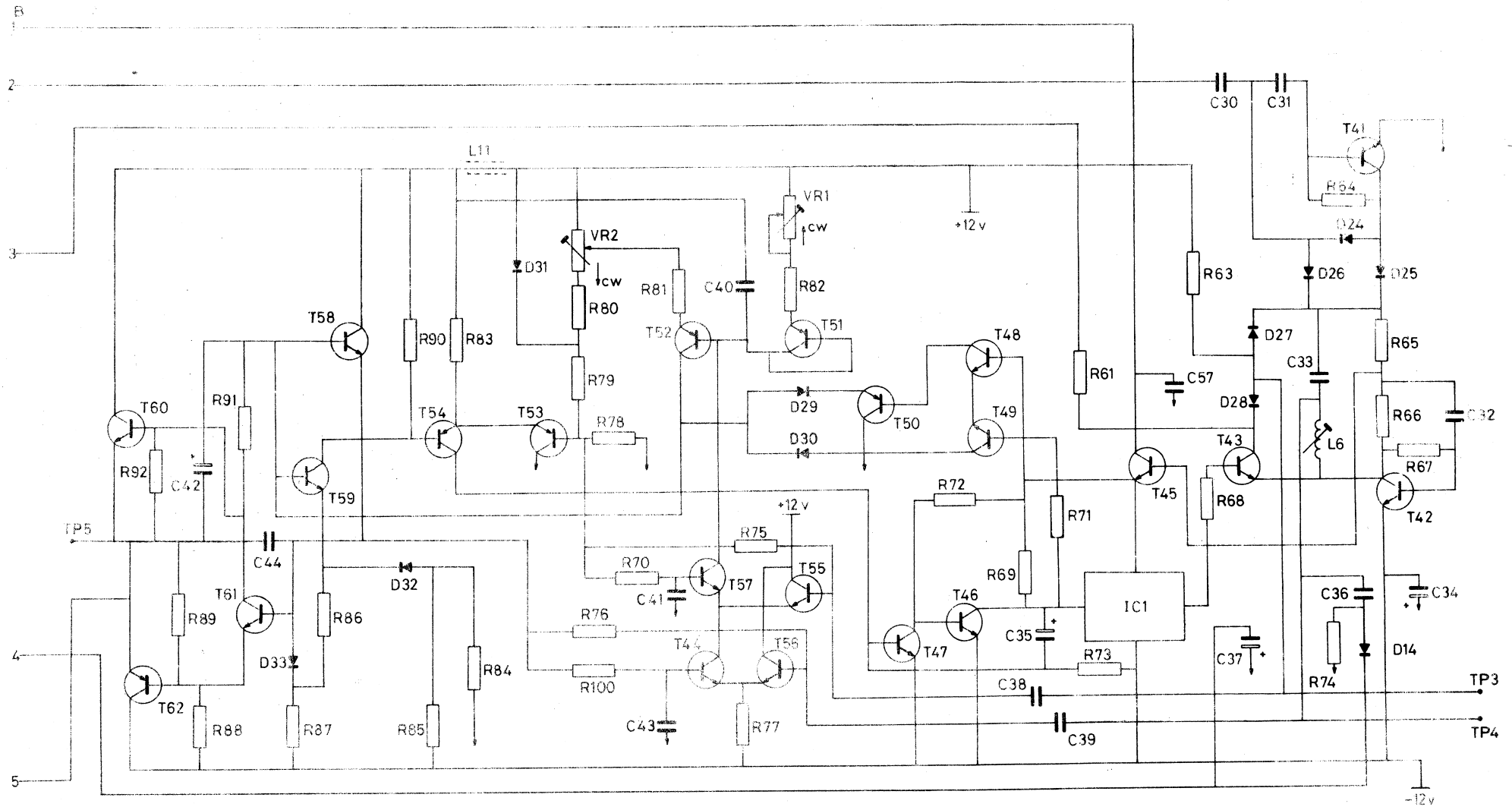




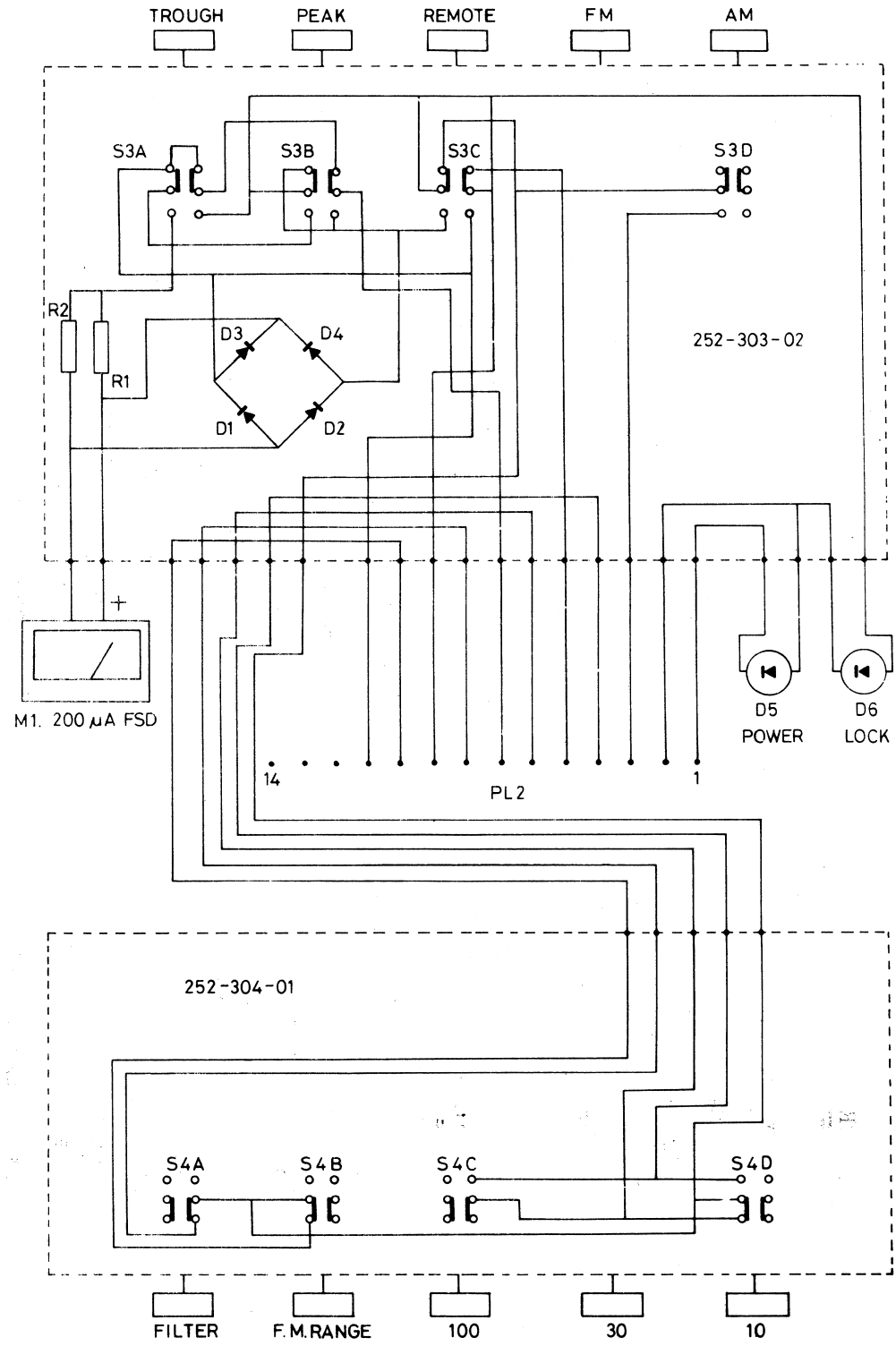
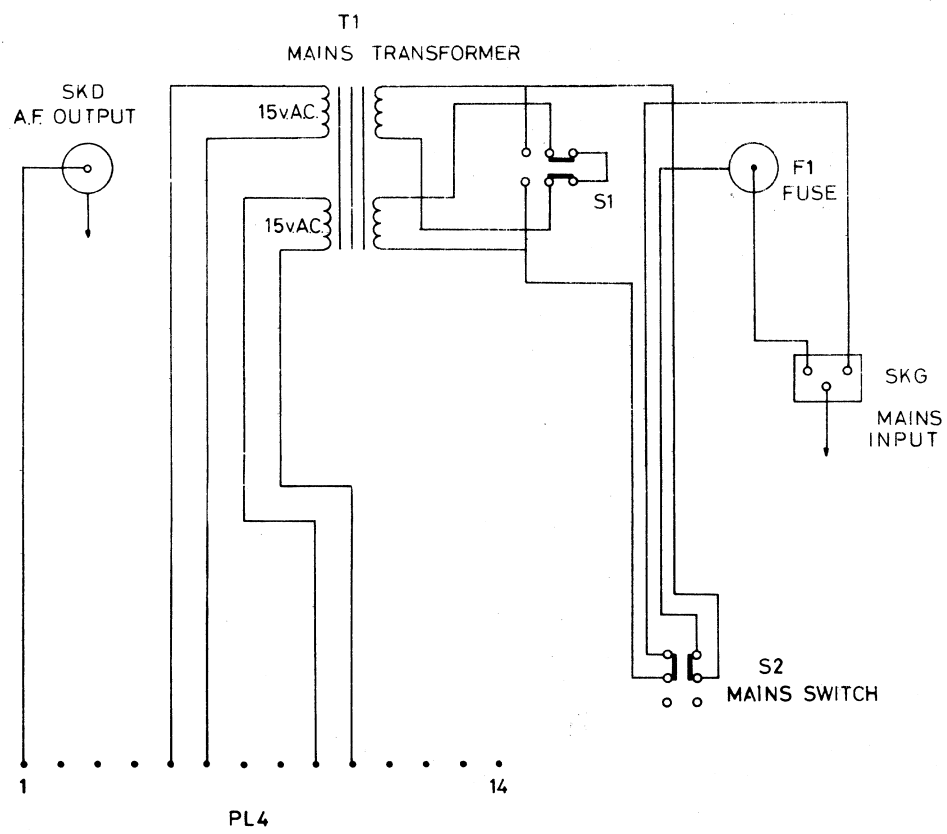
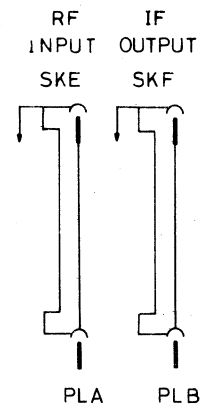
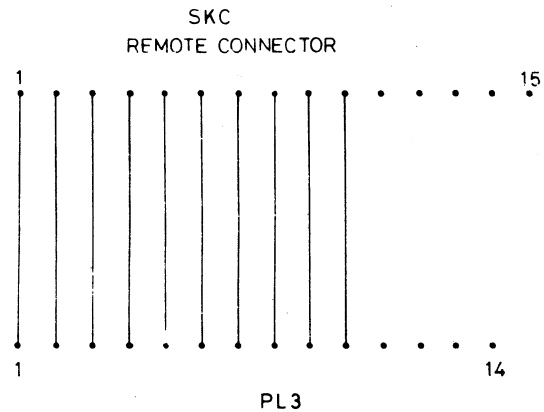
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CIRCUIT DIAGRAM Nº 252-205-01

S1 SHOWN IN 230v POSITION
S2 SHOWN IN ON POSITION

INSTRUCTIONS FOR USE OF INSTRUMENTS FITTED WITH A BATTERY PACK

DESCRIPTION

The Battery Pack allows up to four hours continuous portable operation. The battery may be re-charged fully in less than fourteen hours. During re-charge the instrument is not operational. Control of the instrument power is effected by the single front panel toggle switch.

OPERATION

'OFF'- When the power switch is 'OFF' both the AC supply (if any) and the battery, are disconnected.

'OPERATION ON AC'- With an AC supply connected, switching to 'CHARGE' or to 'ON' will cause the power light to glow 'RED'.

'CHARGING'- Charging the battery may only be accomplished by switching to 'CHARGE' in which condition the instrument proper is not operational. The charging circuit is sensitive to the battery charge state, the charging current being turned off when the battery is fully charged. Hence the instrument may be left on charge indefinitely without harming the battery. Any reading that appears on the meter during charging should be ignored.

To check the state of charge the instrument is switched to 'OFF' whereupon the meter is connected to read the battery voltage for a period of 5 to 10 seconds. This is explained in more detail further on. A fully discharged battery should be re-charged as soon as possible to avoid deterioration.

'USE ON AC'- Use of instrument on AC is quite straightforward and foolproof, since removal of the AC supply will not cause the instrument to revert to battery operation. Hence a battery instrument is equally suited for use on the laboratory bench.

During AC operation the battery is supplied with a small current to maintain its charge state. AC operation is not affected by the battery charge state or by removal of the battery.

BATTERY OPERATION

When the battery is in use, the power indicator will glow 'GREEN'. The battery is brought into operation by switching from 'OFF' to 'ON'. For example if the instrument has been in use on an AC supply, and has been turned off by removal of the supply while leaving the power switch 'ON' the battery can only be brought into operation by switching 'OFF' then 'ON' again.

Audible indication of a low battery is given by the appearance of a high-pitched whistle, progressively dropping in pitch. The unit should not be used once this whistle has appeared; it indicates that the battery has been discharged to the limit of its operational capacity, and further use will result in malfunction of the instrument, as well as possible battery deterioration.

It is strongly recommended that the battery fuse be removed when the instrument is in transit, as a precaution against a possible security scare in the event of the instrument becoming accidentally switched on.

BATTERY CHARGE INDICATION

To avoid switching complications, it has been arranged that the meter is connected to read the battery voltage for a period of 5 to 10 seconds after switching off. Hence a check on the battery charge state while the instrument is in use, (on AC or Battery) is simply obtained by switching off, then back on when the charge state has been noted.

The meter indicates battery volts directly on the 0-10 scale.

Approx. charge state	Voltages during	
	Discharge	Re-charge
0	4.5-5.0	5.5
$\frac{1}{4}$	6.0	6.3
$\frac{1}{2}$	6.1	6.5
$\frac{3}{4}$	6.2	6.8
Full	6.5	7.5

The audible whistle is present when the battery is discharged below 4.5 volts.

FUSES

A fuse is fitted in series with the battery. The size and rating is 20mm, 1A quick-blow. The fuse is located inside the instrument, just above the battery.

To gain access, the instrument top cover must be removed.

(+) ORANGE + WHITE
(-) SLATE

BATTERY 6V 3AH HP3-6
(6m3)