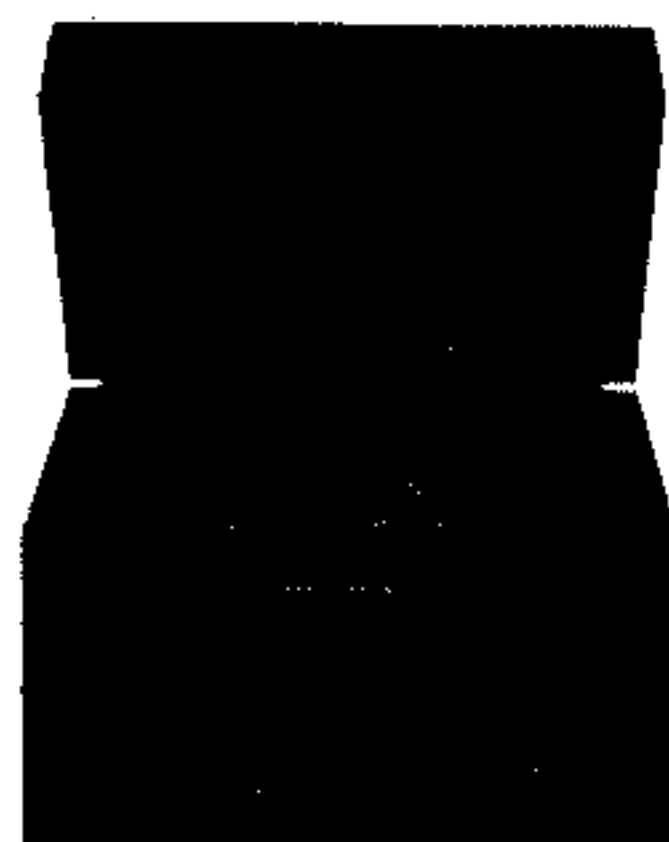
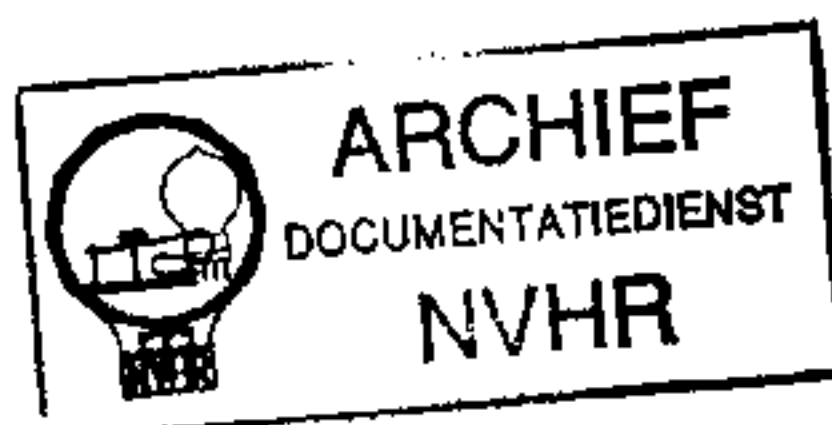


Service  
Service  
Service

Ned. Ver. v. Historie v/d Radio



Voor reparatie-aanwijzingen van het cassettemechanisme zie Service Manual: "Recorders Tape Deck KC855/00"

Voor reparatie-aanwijzingen van de platenspeler zie Service Manual: F7003/00

27 415A12

# Service Manual

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Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

Documentation Technique Service Dokumentation Documentazione di Servizio Huolto-Ohje Manual de Servicio Manual de Servicio



Subject to modification

4822 725 14561

Printed in The Netherlands

# PHILIPS

CS 79 365NL

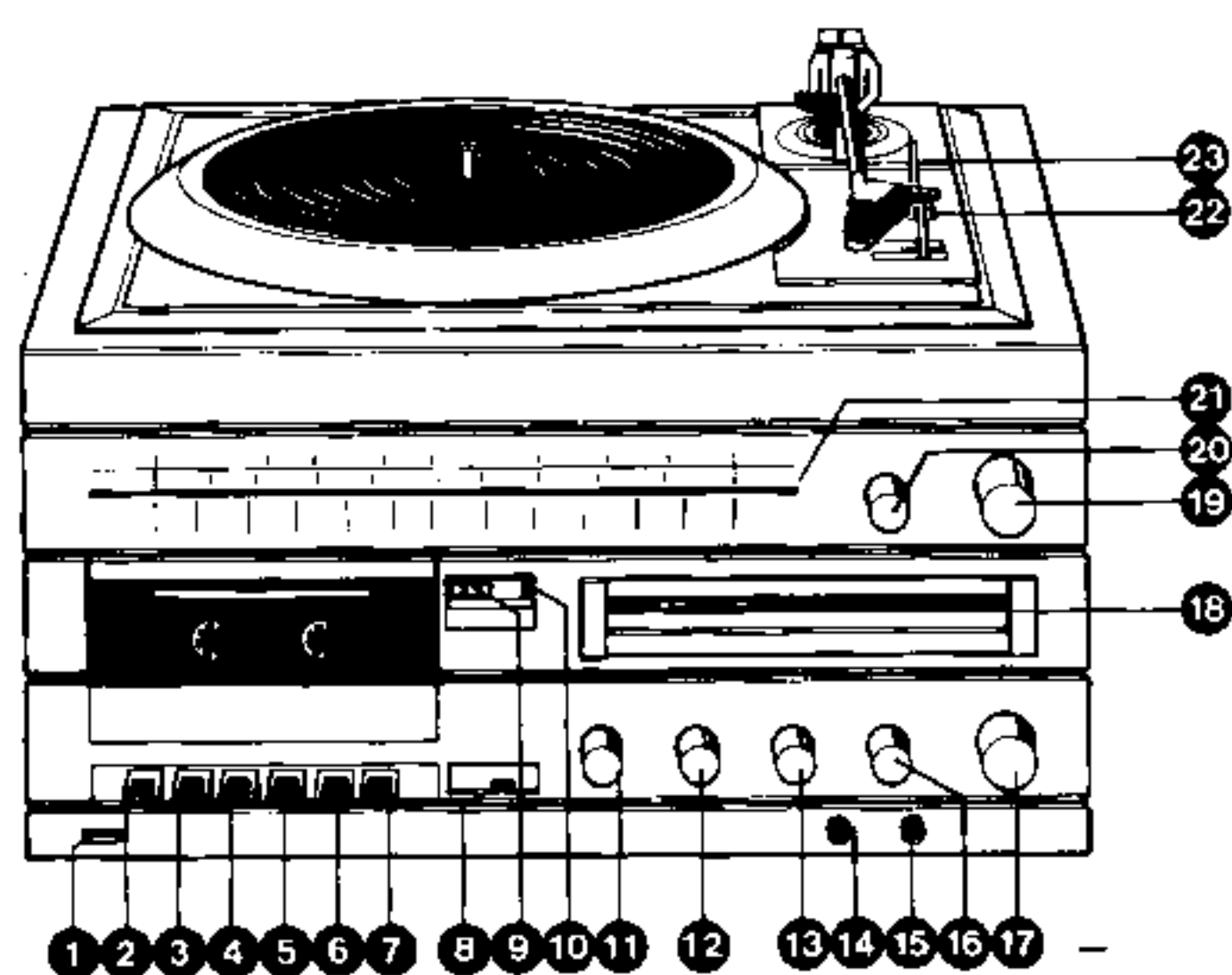
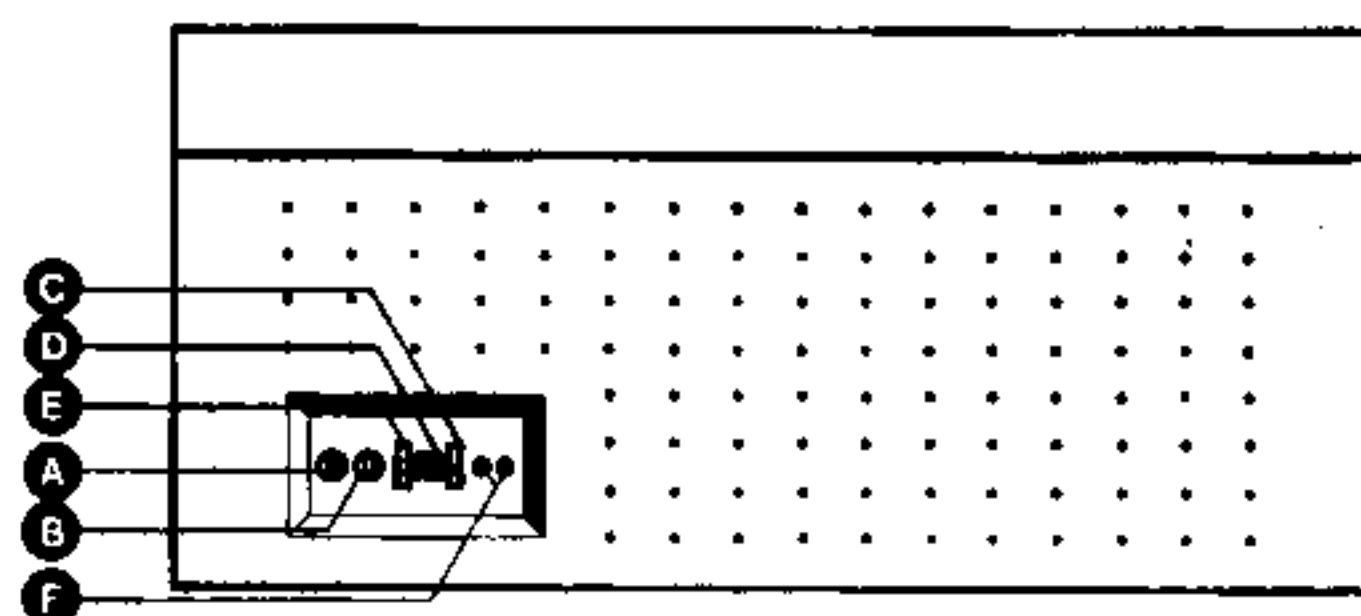


Fig. 1

27 072A12



27 071A12

Fig. 2

### Bedieningsorganen, aansluitingen, etc.

Fig. 1

|    |                                                  |           |       |
|----|--------------------------------------------------|-----------|-------|
| 1  | netschakelaar                                    | SK-F      | ○ ●   |
| 2  | opneemtoets                                      | SK-C      | REC   |
| 3  | snel terugspoel/'review'-toets                   | SK-i      | ⏮     |
| 4  | snelspoel/'cue'-toets                            | SK-i      | ⏭     |
| 5  | start/speeltoets                                 | SK-i SK-E | ▶PLAY |
| 6  | stop/uitwerpttoets                               |           |       |
| 7  | pauzetoets                                       |           |       |
| 8  | RIF (= Radio Interference Filter) schakelaar     | SK-D      |       |
| 9  | teller                                           |           |       |
| 10 | nulstelknop                                      |           |       |
| 11 | ingangskeuzeschakelaar: 'PHONO', 'CASS', 'TUNER' | SK-B      |       |
| 12 | lagetonenregelaar                                | 3521,3522 | ?     |
| 13 | hogetonenregelaar                                | 3531,3532 | ♫     |
| 14 | uitgangsbuss voor stereohoofdtelefoon            | BU-1      | 🎧     |
| 15 | ingangsbuss voor monomicrofoon                   | BU-2      | 🎤     |
| 16 | balansregelaar                                   | 3509      | ⚖     |
| 17 | geluidssterkteregelaar                           | 3505,3506 | ▶     |
| 18 | vermogensindicator voor linker- en rechterkanaal | 7804-7813 |       |
| 19 | afstemknop                                       |           |       |
| 20 | afstembereik/FM mono-stereo selector             | SK-A      |       |
| 21 | FM stereoindicator                               |           |       |
| 22 | keuzeschakelaar voor toerental                   | SK-H      | ④5    |
| 23 | liftheboom voor pick-uparm                       |           |       |

Fig. 2

|   |                                     |        |
|---|-------------------------------------|--------|
| A | aansluitbus voor rechterluidspreker | BU-3   |
| B | aansluitbus voor linkerluidspreker  | BU-4   |
| C | AM antenne-aardaansluiting          | BU-7   |
| D | FM antenne aansluitbus, 75 ohm      | BU-6   |
| E | FM antenne aansluitbus, 300 ohm     | BU-5   |
| F | ingangsbussen voor aux. bron        | BU-8,9 |

'L' = linkerkanaal 'R' = rechterkanaal

**SPECIFICATIES**

|                                               |    |                                                                                                          |
|-----------------------------------------------|----|----------------------------------------------------------------------------------------------------------|
| Voedingsspanningen                            | :  | 110,127,220,240 V AC                                                                                     |
| Opgenomen vermogen                            | :  | 55 W.                                                                                                    |
| Afmetingen                                    | :  | 410x275x353 mm.                                                                                          |
| Golfbereiken                                  | FM | : 87.5-108 MHz                                                                                           |
|                                               | MW | : 520-1605 kHz                                                                                           |
|                                               | LW | : 150-260 kHz                                                                                            |
| Gevoeligheid                                  | FM | : Mono 26 dB S/N: 3 $\mu$ V<br>bij 75 kHz zweving.<br>Stereo 46 dB S/N: 45 $\mu$ V<br>bij 75 kHz zweving |
|                                               | AM | : voor 26 dB S/N 90 $\mu$ V EMF                                                                          |
| Ingangsimpedantie FM                          | :  | 75/300 $\Omega$ . balanced.                                                                              |
|                                               | AM | : 300 $\Omega$                                                                                           |
| Uitgangsvermogen (8 $\Omega$ )                | :  | 2x6 W. D $\leq$ 1%                                                                                       |
| Ingangssignaal voor<br>2x6 W output bij 1 kHz | :  |                                                                                                          |
| Microfoon                                     | :  | 1.2 mV at 20 k $\Omega$ .                                                                                |
| Auxiliary                                     | :  | 150 mV at 100 k $\Omega$                                                                                 |
| Uitgangsimpedantie                            | :  | 8 $\Omega$                                                                                               |
| Uitgangsimpedantie<br>hoofdtelefoon           | :  | 8-1000 $\Omega$                                                                                          |

**RECORDER**

|                   |   |              |
|-------------------|---|--------------|
| Snelheid          | : | 4.75 cm/sec  |
| Wow en flutter    | : | $\leq$ 0.3%  |
| S/N ratio (DIN)   | : |              |
| voor ferro tape   | : | $\geq$ 42 dB |
| frequentie bereik | : | 40 Hz-10 kHz |

Voor meer uitgebreide technische specificaties  
gelieve de commerciële dokumentatie te raadplegen.

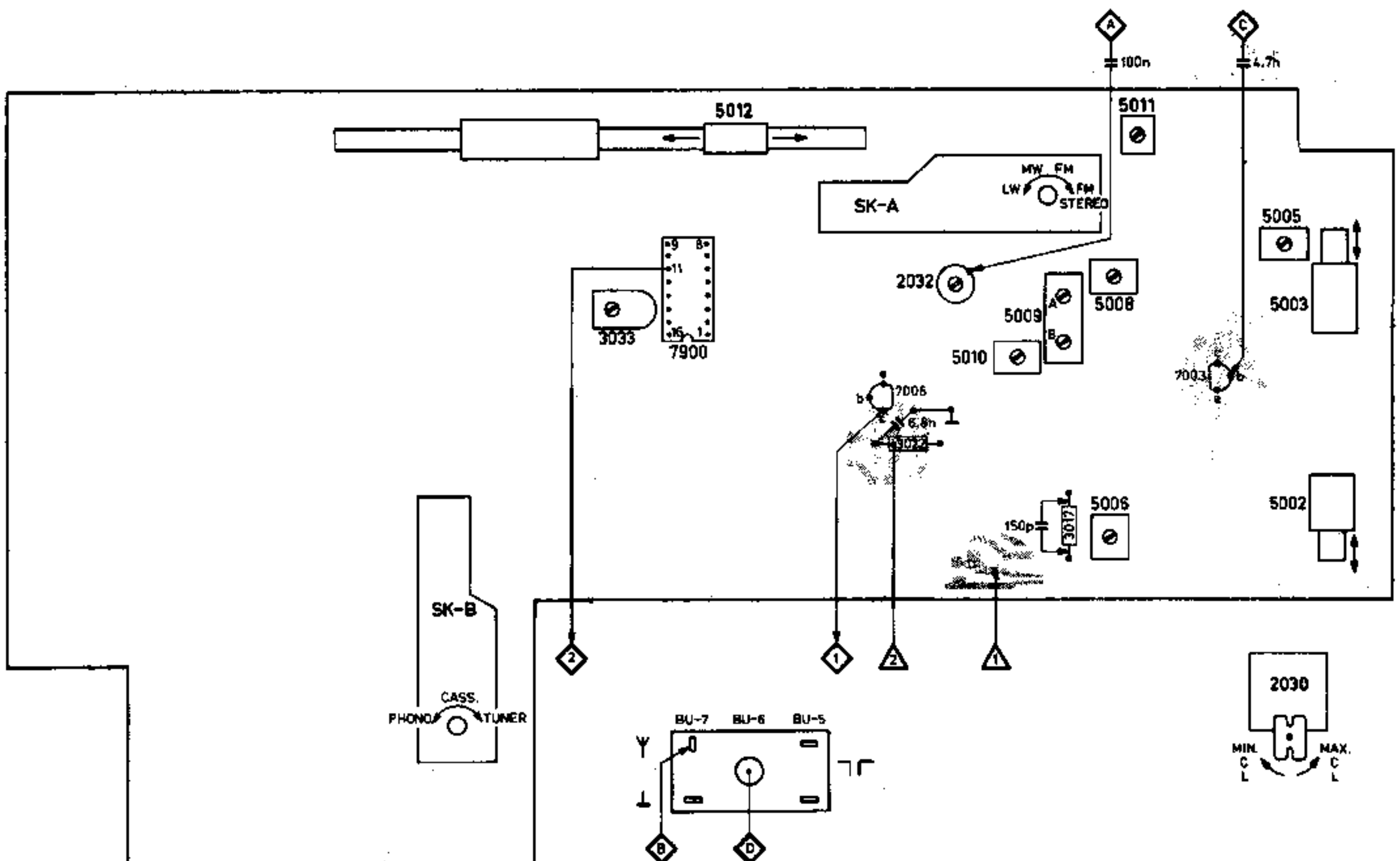


Fig. 3

De metingen dienen te worden uitgevoerd met zo klein mogelijke ingangssignalen.

|           |                                                                      |  |                       |        |              |                             |
|-----------|----------------------------------------------------------------------|--|-----------------------|--------|--------------|-----------------------------|
| SK-A      |                                                                      |  |                       | Detune |              |                             |
| MW        | 452/468 kHz<br>Δf 7 kHz<br>(via 100 nF)<br>(sweep range 400/500 kHz) |  | Min. C<br>2030        |        | 5009<br>5010 | sym.<br>+ max.              |
| LW        | 148 kHz<br>mod. AM 1 kHz                                             |  | Max. C<br>2030        |        | 5011         | max.                        |
| MW        | 520 kHz<br>mod. AM 1 kHz                                             |  |                       |        | 5012         |                             |
|           | 1605 kHz<br>mod. AM 1 kHz                                            |  |                       |        | 2032         |                             |
| LW        | 195 kHz<br>mod. AM 1 kHz                                             |  |                       |        | 5008         |                             |
| FM (IF)   | 10.7 MHz<br>Δf 700 kHz<br>via 4n7<br>(sweep range 10/11 MHz)         |  | Min. L<br>5002 / 5003 |        | 5005         | max.                        |
|           |                                                                      |  |                       |        | 5006         | S-curve sym.                |
| FM (RF)   | 87.5 MHz<br>mod. FM 1 kHz                                            |  | Max. L<br>5002/5003   |        | 5003         | max.                        |
|           | 98 MHz<br>Δf 350 kHz<br>(sweep range 75/110 MHz)                     |  |                       |        | 5002         | max.<br>+ sym.              |
| FM Stereo | No signal                                                            |  |                       |        | 3033         | Counter<br>19 kHz ± 0.1 kHz |

↕ Repeat - Herhalen - Répéter - Wiederholen - Ricominciare - Repetera - Gentage - Gjentagelse - Toista

Fig. 4

|   |                                      |                |                         |                |                       |             |      |      |      |      |
|---|--------------------------------------|----------------|-------------------------|----------------|-----------------------|-------------|------|------|------|------|
| R | 3011 ÷ 3015                          | 3020           | 3035 ÷ 3039             | 3031 ÷ 3033    | 3101                  | 3105        | 3109 | 3103 | 3106 | 3102 |
|   | 3044                                 | 3021           | 3040 3041               | 3043           | 3100                  | 3104        | 3107 | 3108 |      |      |
|   | 3000 ÷ 3009                          | 3016 ÷ 3018    | 3010 3019               | 3022 ÷ 3029    | 3030                  | 3053 ÷ 3060 |      |      |      | 3777 |
| C | 2020 2019 2031 2039 2035 ÷ 2037      | 2032 ÷ 2034    | 2078 2064               | 2063           | 2102 2103 2109 2101   | 2105 2111   | 2104 |      |      |      |
|   | 2018 2028 2017 2023 2040 2024 ÷ 2026 | 2027           | 2057 2058               | 2052 ÷ 2056    | 2060 2112 2106 ÷ 2108 | 2110 2100   |      |      |      |      |
|   | 2001 ÷ 2016 2079 2041 2021           | 2080 2029 2042 | 2043 ÷ 2046 2047 ÷ 2051 | 2074 ÷ 2077    | 2059 2073 2072        |             |      |      |      |      |
| M | 5001 ÷ 5005                          | 5006 ÷ 5011    | SK-A                    |                | 5012                  | 7100        |      |      |      |      |
|   |                                      | 5012           |                         | 7006 7011 7010 | 7009                  |             |      |      |      |      |
|   | 7001 ÷ 7005                          | 7008           | 7015                    | 7007           | 7014 7015             | SK-B        |      |      |      |      |

PANEL 4

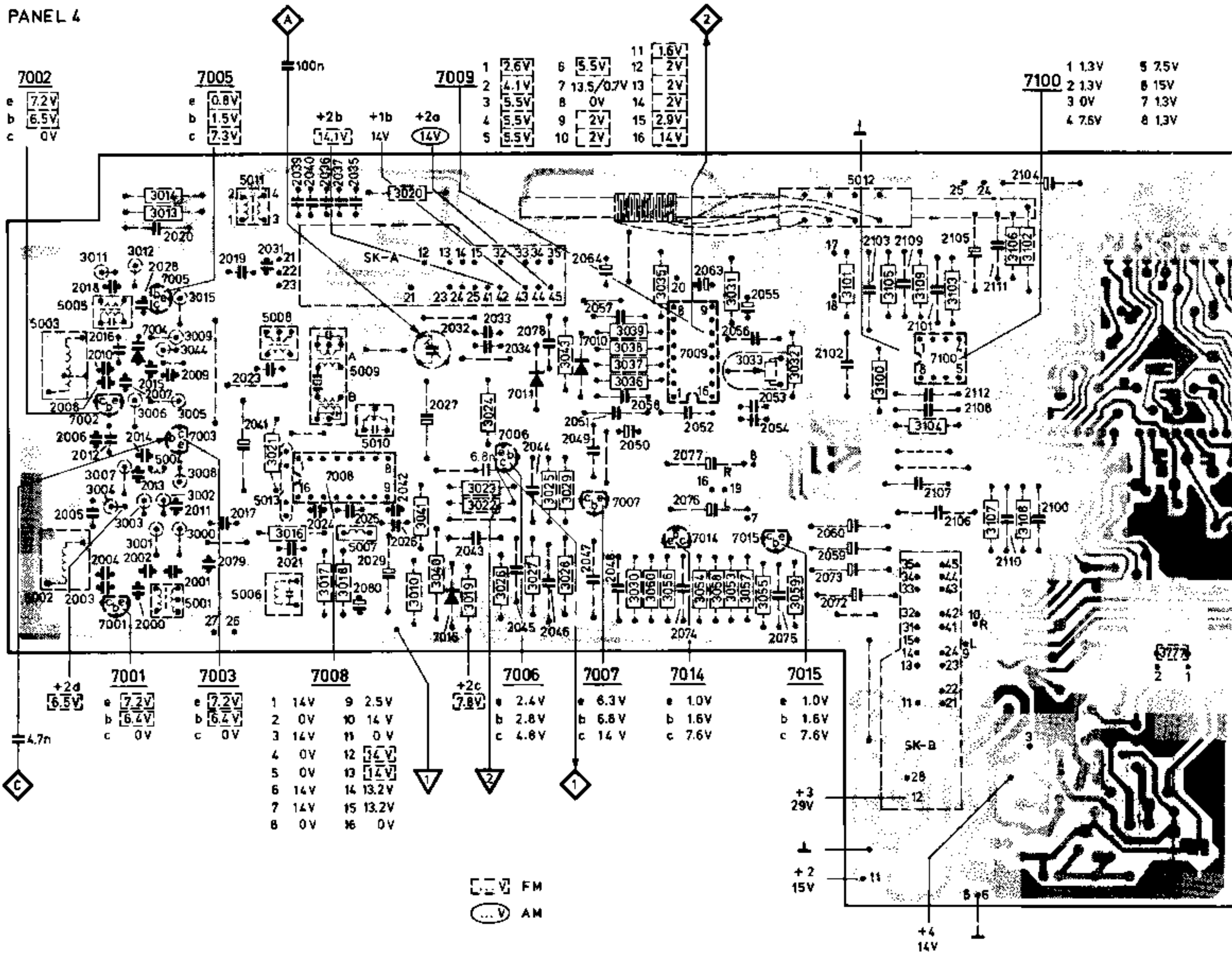


Fig. 5

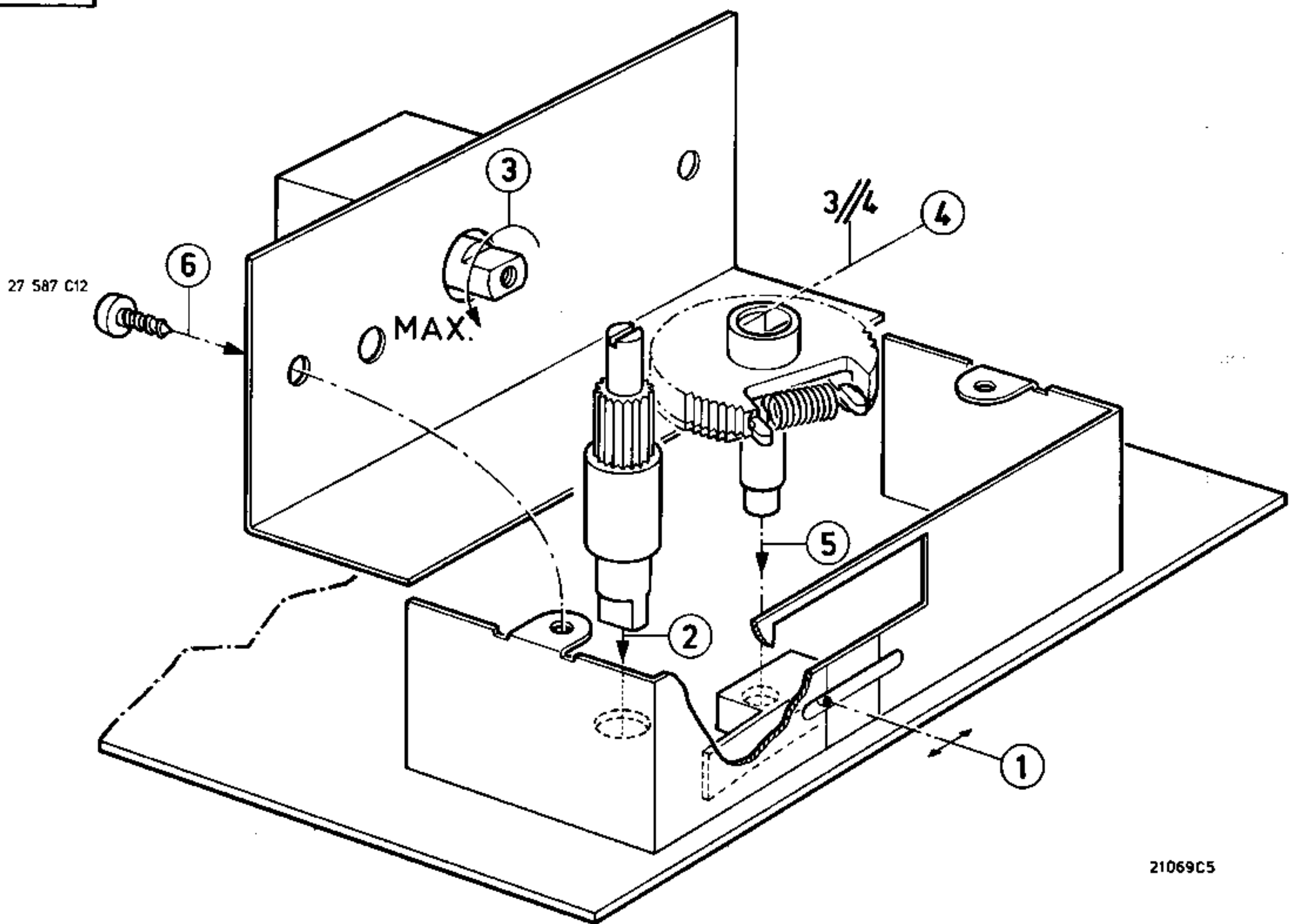
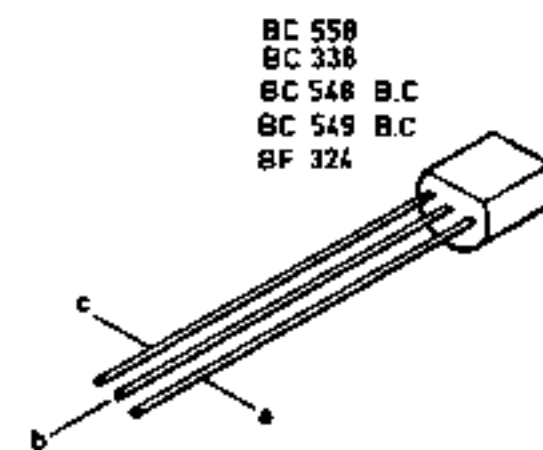
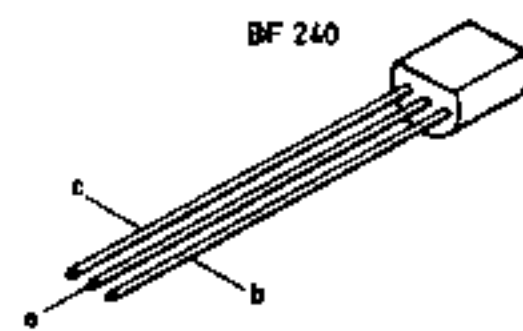
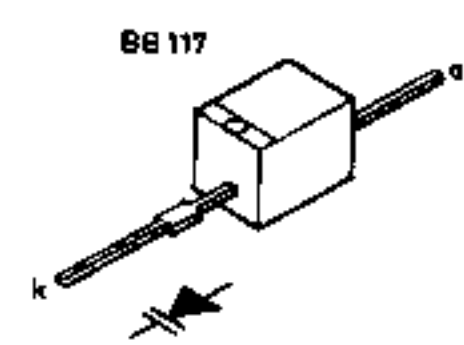
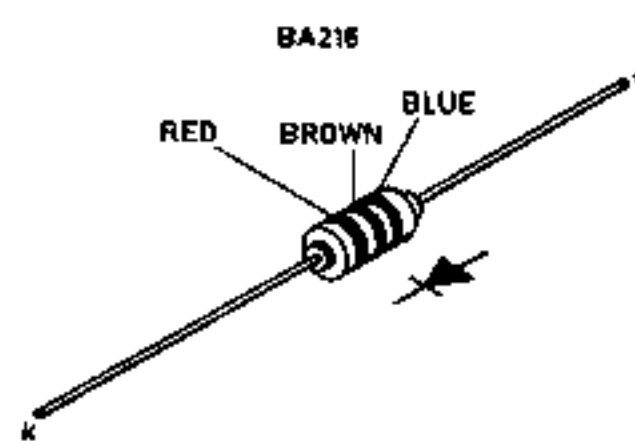
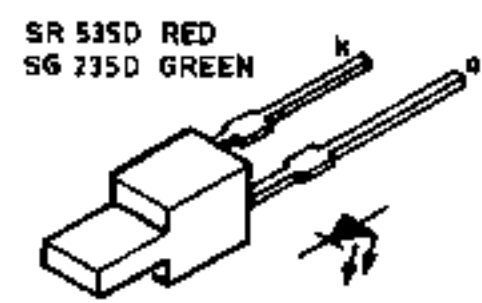
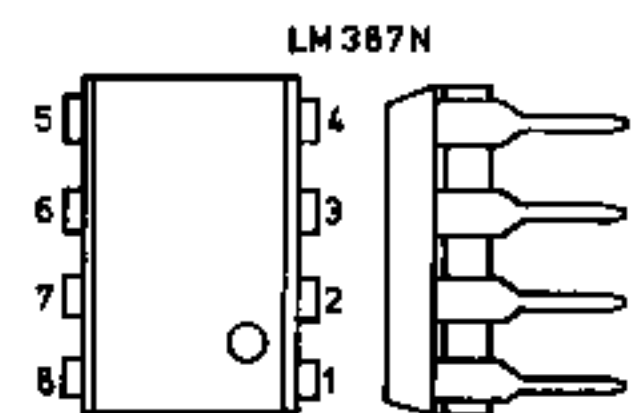
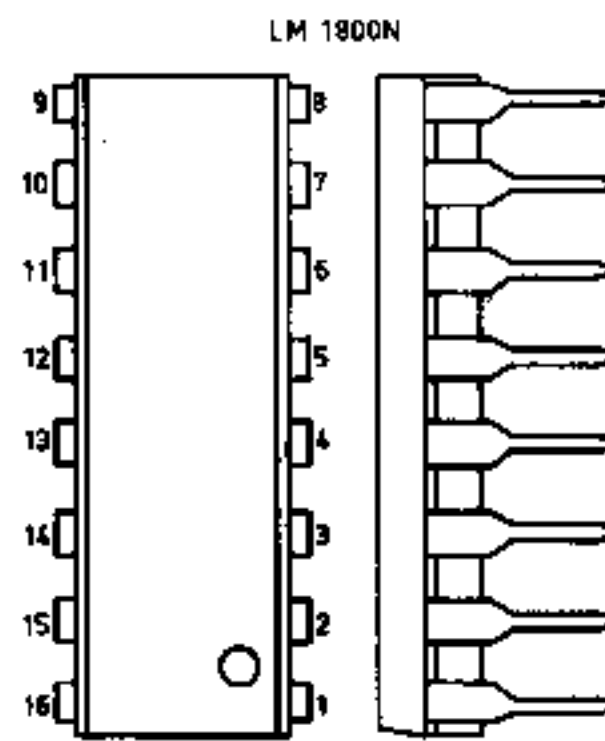
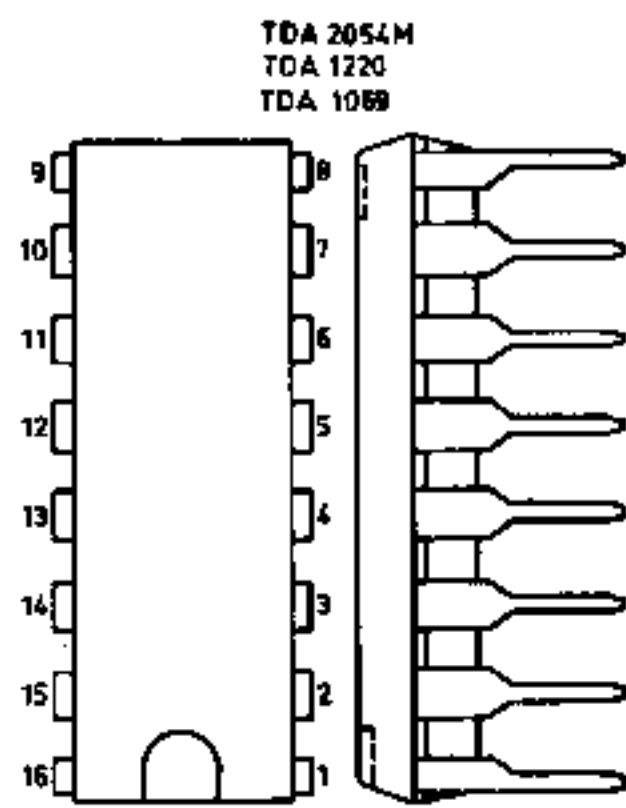


Fig. 6

|       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| R     | 3045 | 3000 | 3017 | 3018 | 3004 | 3041 | 3009 | 3023 | 3008 | 3010 | 3015 | 3027 | 3028 |      |      |      |      |      |      |
|       | 3046 | 3021 | 3001 | 3006 |      | 3020 | 3022 | 3024 | 3040 | 3011 | 3012 | 3013 | 3029 |      |      |      |      |      |      |
|       |      | 3016 | 3005 |      | 3007 |      |      |      | 3044 | 3025 |      | 3014 |      |      |      |      |      |      |      |
| C     | 2030 | 2034 | 2041 | 2000 | 2002 | 2003 | 2007 | 2004 | 2080 | 2026 | 2029 | 2012 | 2014 | 2009 | 2044 | 2018 | 2028 |      |      |
|       | 2032 | 2038 | 2023 | 2021 | 2001 | 2011 | 2006 | 2025 | 2008 | 2039 | 2035 | 2005 | 2027 | 2013 | 2043 | 2017 | 2045 | 2020 | 2048 |
|       | 2033 |      | 2019 | 2024 |      |      | 2036 | 2037 | 2015 | 2040 | 2010 | 2042 | 2016 | 2031 | 2030 |      | 2046 | 2047 | 2079 |
| MISC. | 5000 | 7000 | 5001 | 7001 | 7002 | 5010 | 7004 | 7003 | 5005 | 7005 |      |      |      |      |      |      |      |      |      |
|       | 5008 |      |      | 5006 | 5009 | 7008 | 5002 | 5004 | 7006 |      |      |      |      |      |      |      |      |      |      |
|       | 5012 |      |      | 5011 | 5007 |      | 5003 |      |      |      |      |      |      |      |      |      |      |      |      |

## RF-CIRCUIT DIAGRAM

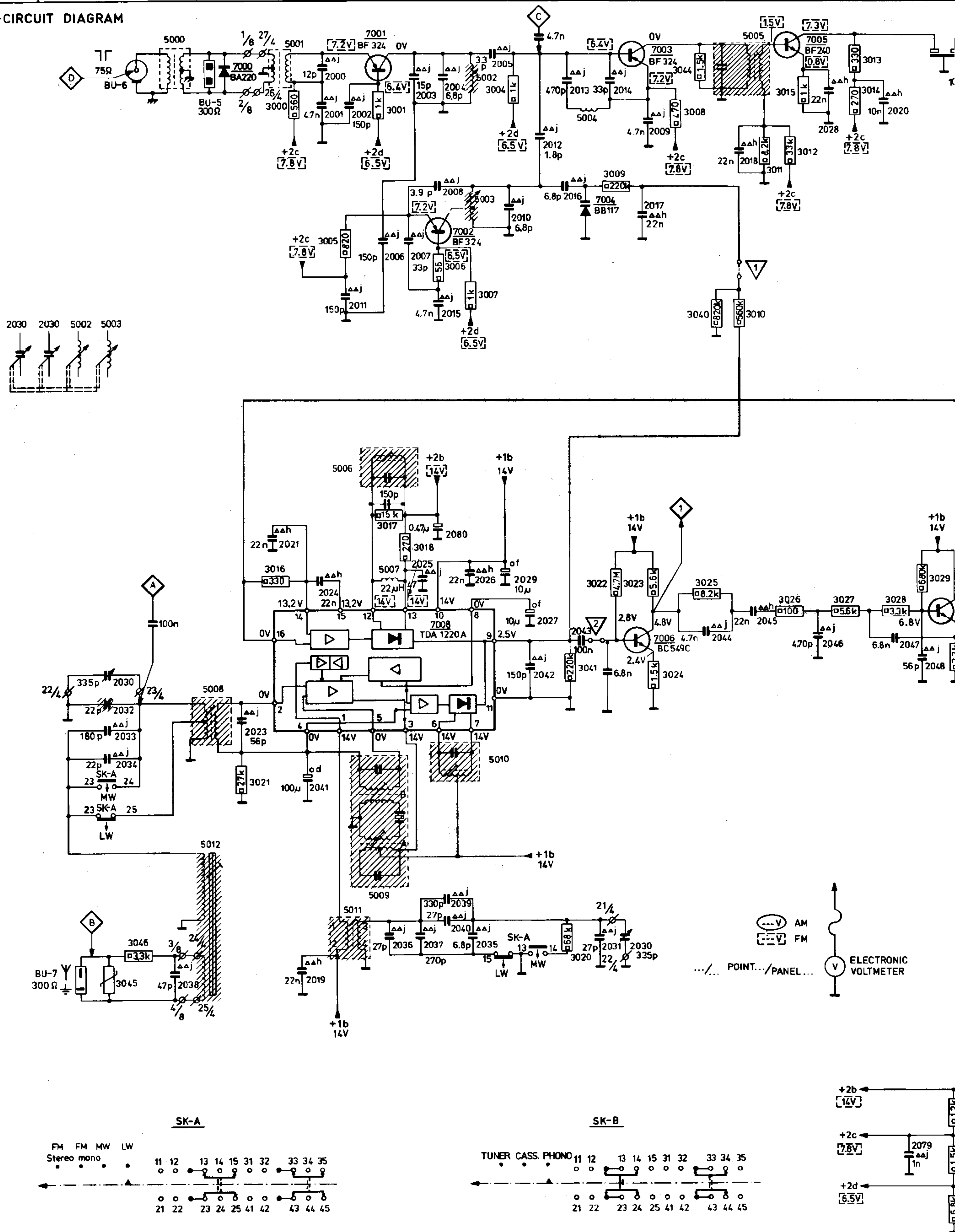


Fig. 7



|                  |      |      |      |       |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |
|------------------|------|------|------|-------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| R                | 3702 | 3704 | 3770 | 3706  | 3705 | 3763 | 3710  | 3712 | 3714 | 3722 | 3716 | 3720 | 3718 | 3724 | 3774 | 3726 | 3728 | 3730 |      |
|                  | 3769 | 3701 | 3703 | 3772  | 3771 | 3708 | 3707  | 3773 | 3709 | 3711 | 3713 | 3721 | 3715 | 3719 | 3717 | 3723 | 3775 | 3725 | 3729 |
| C                |      | 2704 | 2702 |       |      |      | 2734  | 2706 | 2736 | 2708 | 2737 | 2710 | 2722 | 2709 | 2741 |      | 2714 | 2716 | 2718 |
|                  |      | 2703 | 2701 | 2729  |      |      | 2735  | 2705 | 2738 | 2707 | 2721 | 2742 | 2712 | 2711 |      | 2713 | 2715 | 2717 |      |
| MISC<br>DIVERSEN |      | 7707 | 7708 | 7702b |      |      | 7702a | SK-D |      | SK-C |      |      |      |      |      |      | K101 | K1   | SK-C |
|                  |      |      |      | 7701b |      |      | 7701a |      |      | 7709 |      |      |      |      |      |      | K2   |      |      |

## REC-CIRCUIT DIAGRAM

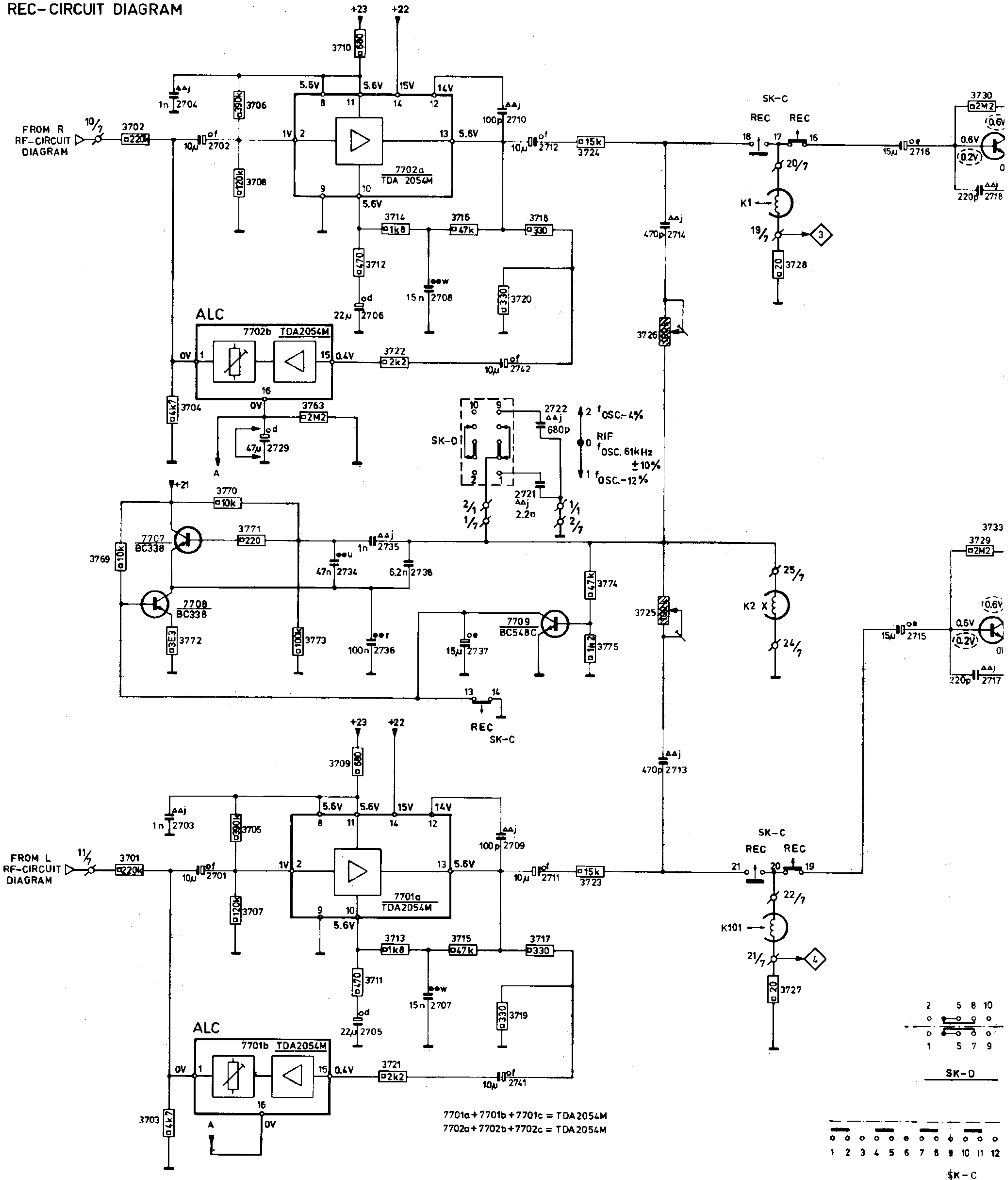


Fig. 8

|           |      |      |  |             |      |      |      |           |      |      |      |      |      |      |      |         |      |      |
|-----------|------|------|--|-------------|------|------|------|-----------|------|------|------|------|------|------|------|---------|------|------|
| 3730      | 3734 | 3733 |  | 3738        | 3740 | 3739 | 3767 | 3744      | 3748 | 3750 | 3765 | 3754 | 3753 | 3768 | 3756 | 3761    | 3788 | 3758 |
| 3729      | 3732 | 3731 |  | 3737        | 3742 | 3741 |      | 3743      | 3747 | 3549 | 3766 | 3752 | 3751 | 3755 | 3762 |         |      | 3757 |
| 2718      |      |      |  | 2720        | 2724 |      |      |           |      | 2726 | 2744 | 2731 |      | 2728 | 2733 |         |      |      |
| 2717      |      |      |  | 2719        | 2723 |      |      |           |      | 2725 | 2743 | 2732 |      | 2727 | 2730 |         |      |      |
| 7704 SK-C |      |      |  | 7702 c SK-C |      |      |      | 7706 SK-E |      |      |      | BU-8 |      | BU-9 |      | M1 SK-I |      | 4503 |
| 7703      |      |      |  | 7701c       |      |      |      | 7705      |      |      |      |      |      |      |      |         |      |      |

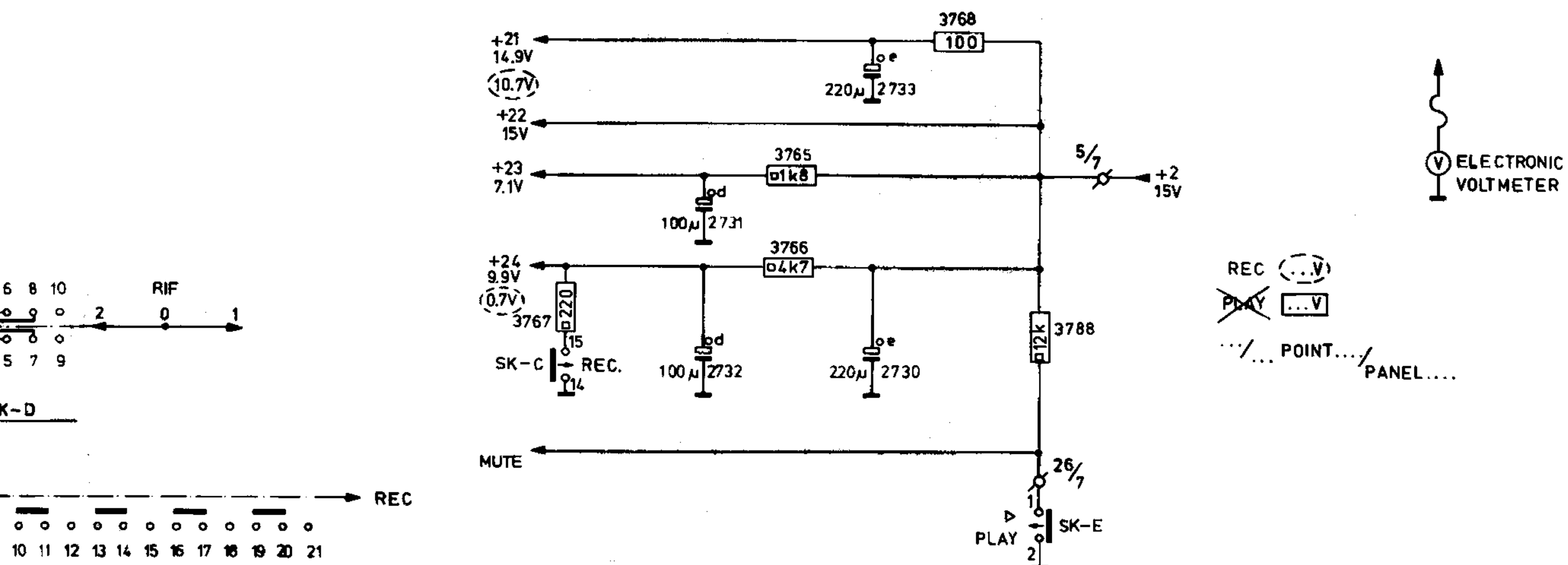
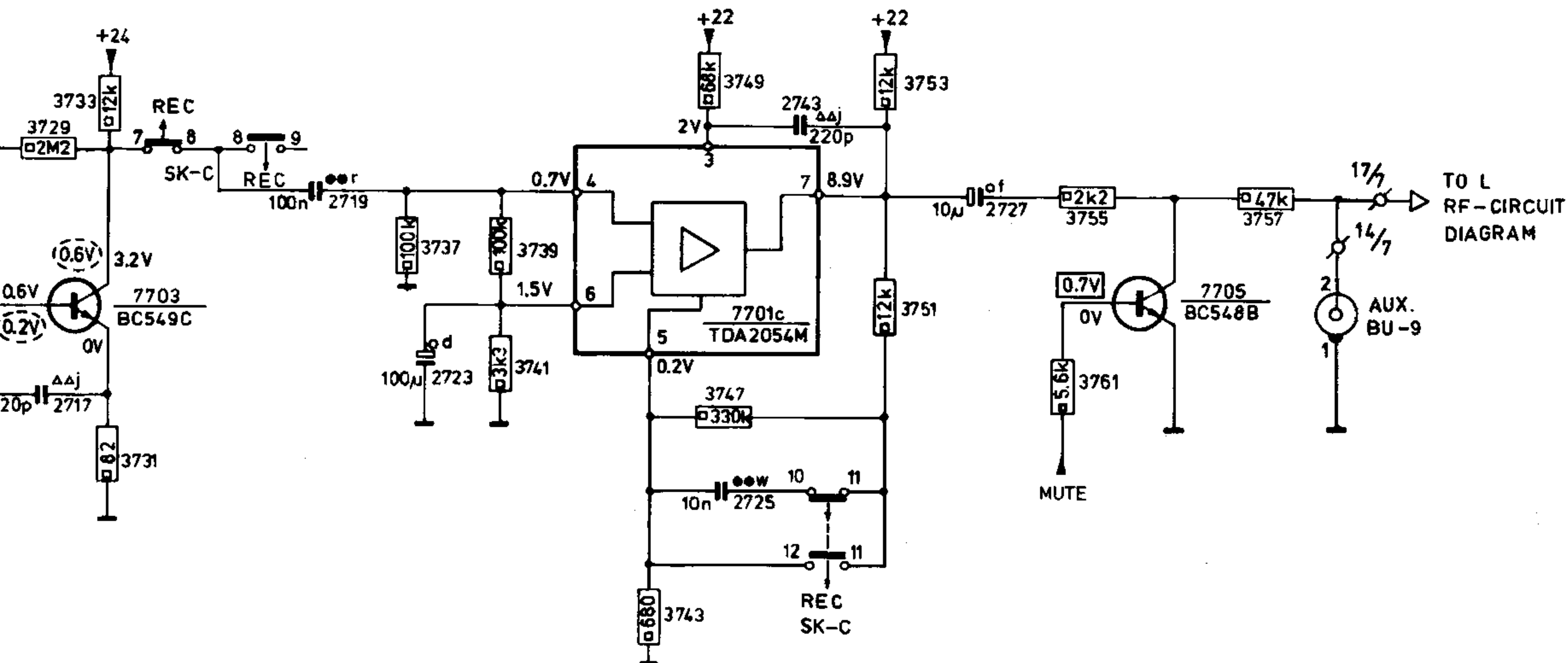
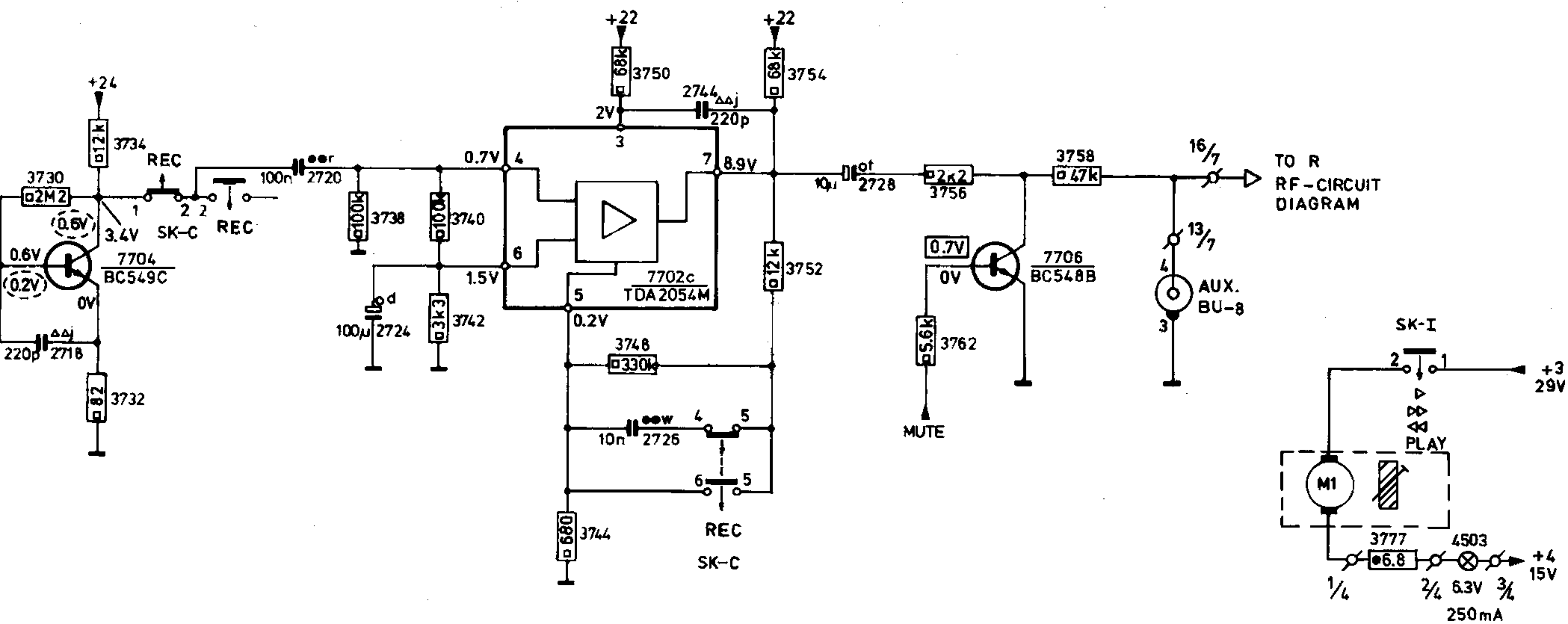


Fig. 8

|              |                                                                          |                                                             |                                                       |                       |             |                |             |
|--------------|--------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------|-----------------------|-------------|----------------|-------------|
| MISC.        | 7701                                                                     | 7702                                                        | 7705 7706                                             | 7707 7708             | 7709        | 5K-C           | 7703 7704   |
| C            | 2741 2729, 2742, 2710, 2703 ÷ 2709                                       | 2711 2733 2712 2702 2728                                    | 2701 2737, 2744, 2736, 2730 ÷ 2732, 2743              | 2723 ÷ 2727           | 2719 2720   | 2734 2736 2735 | 2713 ÷ 2718 |
| R3701 ÷ 3738 | 3711, 3712 ÷ 3722, 3707, 3710, 3709, 3703 ÷ 3705, 3708, 3706, 3702, 3786 | 3737                                                        | 3730                                                  | 3733 3734, 3742, 3723 | 3725 ÷ 3732 |                |             |
| R3739 ÷ 3776 | 3763 3768                                                                | 3765 3766, 3762, 3761, 3750, 3749, 3754 ÷ 3758, 3739 ÷ 3744 | 3769 ÷ 3772, 3759 ÷ 3753, 3747 3748, 3762, 3775, 3773 | 3774                  |             |                |             |

**PANEL 7**

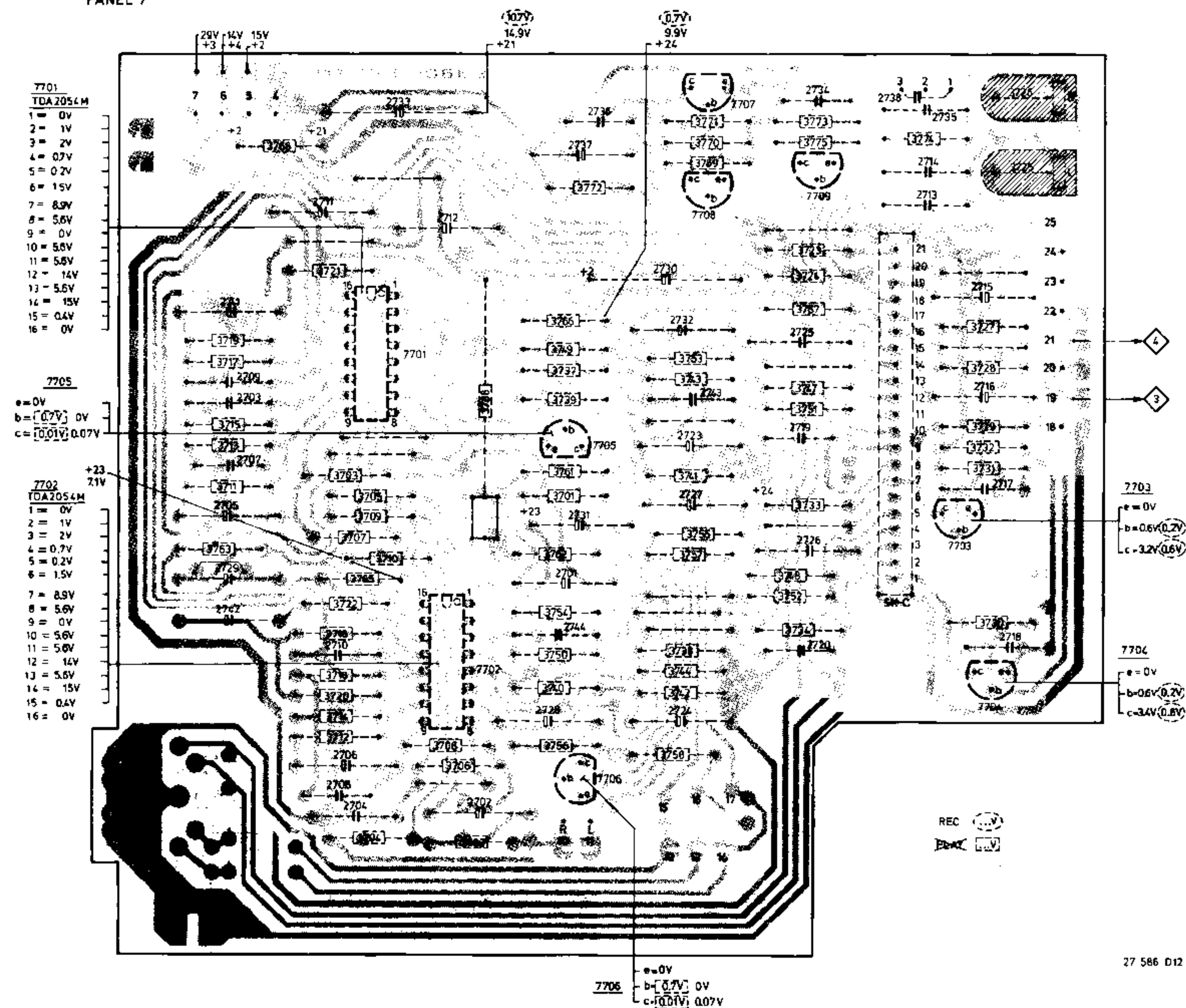
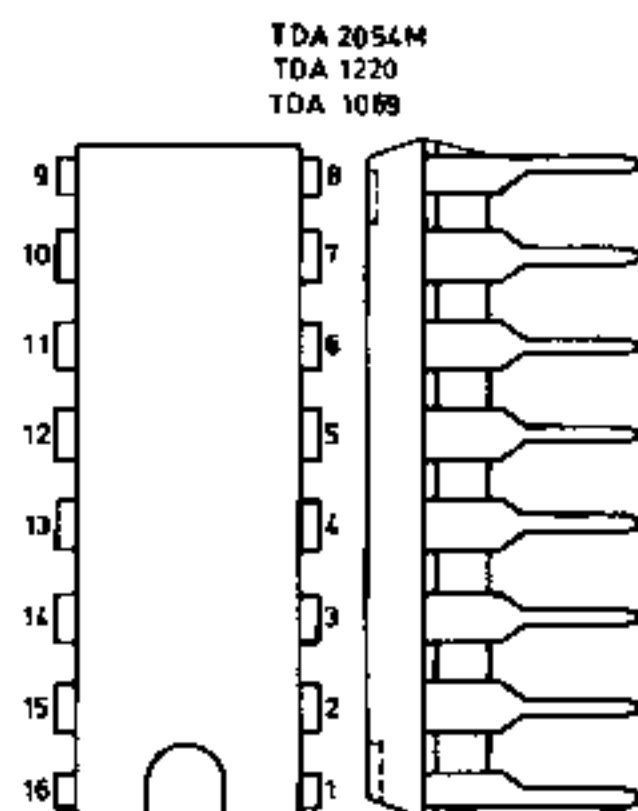


Fig. 9



BC 558  
BC 330  
BC 548 B.C  
BC 549 B.C  
BF 324

## A. Bandsnelheid

### Met wow- en fluttermeter

- Sluit het apparaat via BU-8,9 aan op de wow en fluttermeter.
- Apparaat in stand "weergave" met het 3150 Hz gedeelte van testcassette SBC133. (4822 397 30039).
- Met de potentiometer in de motor kan de snelheid worden afgesteld. Maximaal toelaatbare afwijking  $\pm 2\%$ .
- Tevens kan op deze meter de jengelwaarde worden afgelezen. Deze mag maximaal 0.3% bedragen.

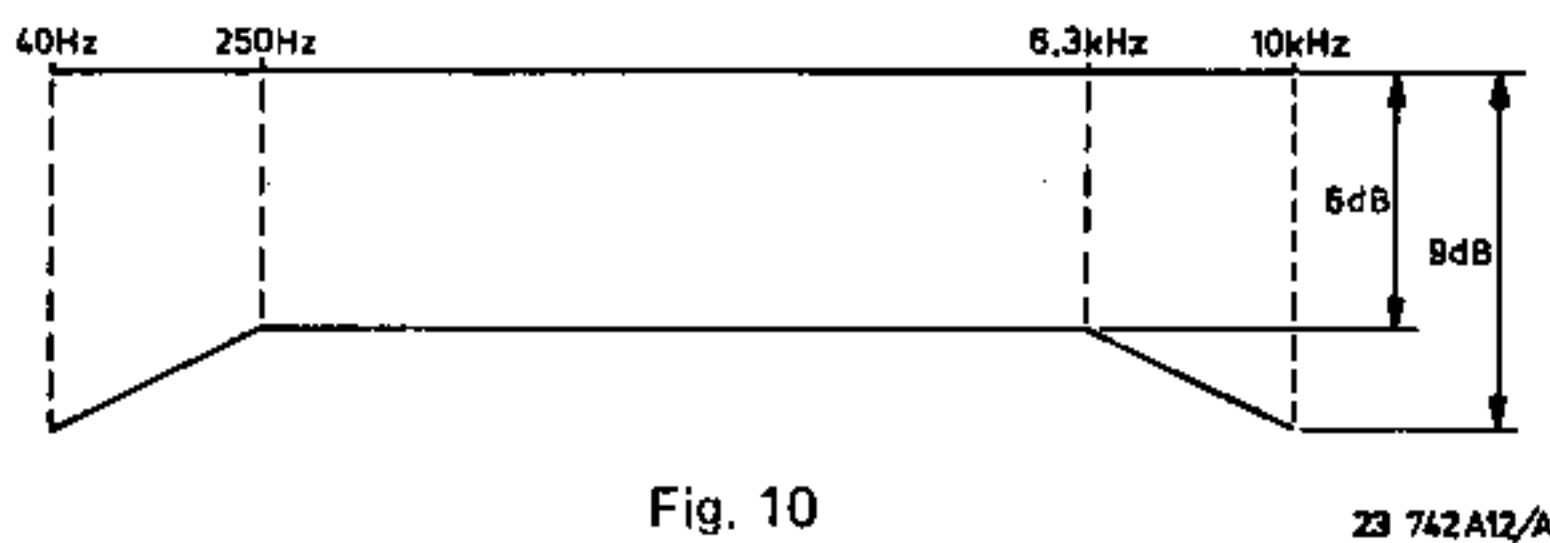
### Met cassette service set 801/CSS

- Sluit het apparaat via BU3 (4) aan op de cassette service set.
- Apparaat in stand "weergave" met de 50 Hz zijde van de testcassette.
- Regel met de potentiometer in de motor de zweving van de test indicator op minimum.

## B. Weergave frekwentie karakteristiek

- Apparaat in stand "weergave" met testcassette SBC133, de frekwenties tussen 40 Hz en 10 kHz moeten liggen binnen Fig. 10.

*Opmerking:* Indien nodig controleer de azimuth instelling van de opname/weergave kop.



## C. Instellen voormagnetisatiestroom

- Bij het instellen van de voormagnetisatiestroom moet een compromis worden gevonden tussen het frekwentiebereik en de vervorming. De richtwaarde is 550  $\mu\text{A}$  wat overeenkomt met een spanning van 11 mV over 3727 (3728).

meetpunten **3** en **4**.

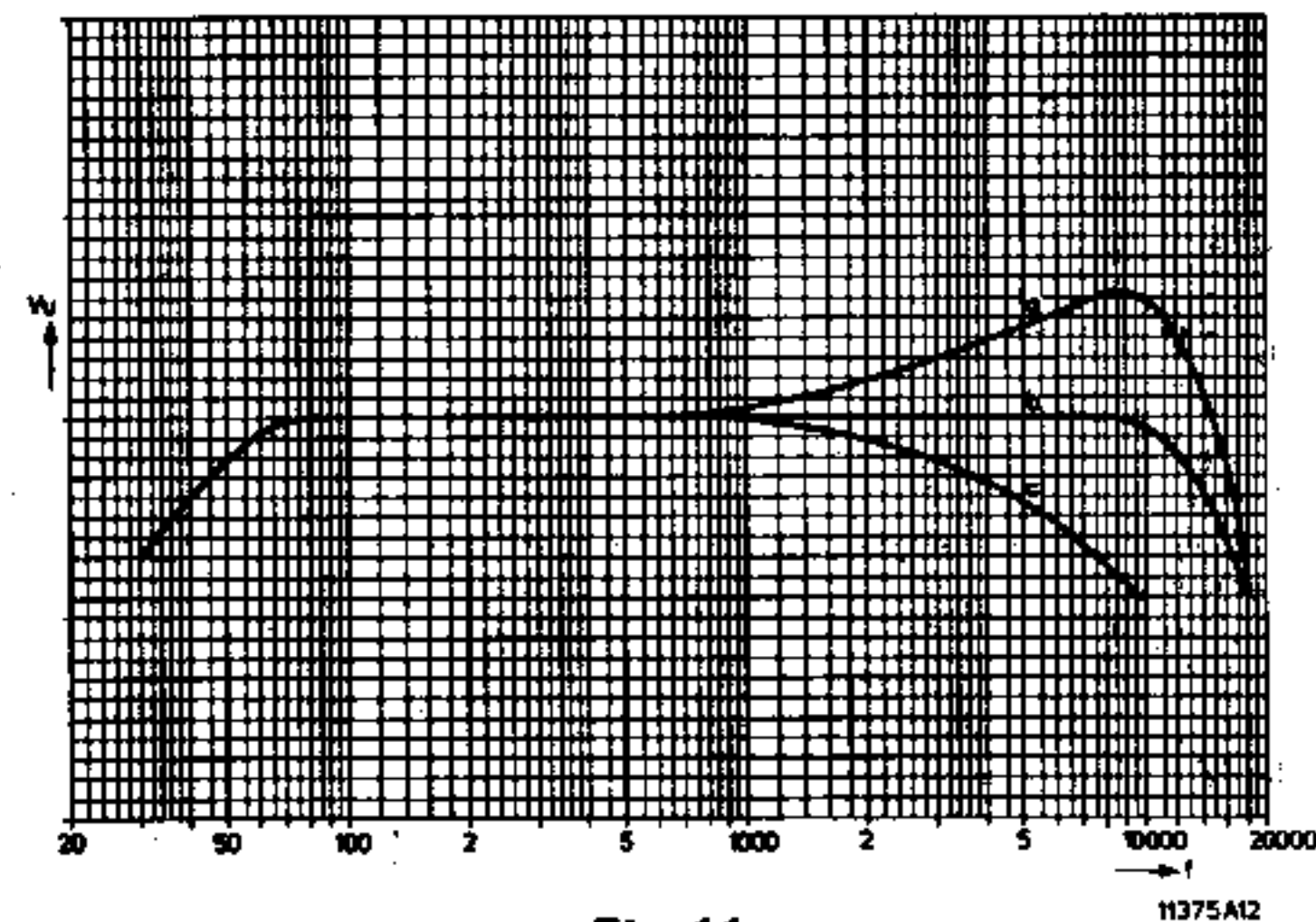
- Bij een goede instelling zal de frekwentie karakteristiek als in Fig. 11 curve b verlopen. De 3de harmonische vervorming moet  $\leq 4.3\%$  zijn.

- Bij een te grote voormagnetisatie worden de hoge tonen te veel verzwakt (Fig. 11 curve c).
- Bij een te kleine voormagnetisatie wordt de vervorming te groot. De frekwentie karakteristiek ziet er dan uit volgens Fig. 11 curve a.
- De voormagnetisatie kan worden ingesteld met 3725 (3726) richtwaarde 11 mV over 3727 (3728).

Meetpunten **3** en **4**.

## D. Controle frekwentie karakteristiek

- Apparaat in stand "recording" met ferro testcassette SBC133. Bij minder hoge nauwkeurigheidseisen kan ook een normale ferro cassette van goede kwaliteit worden gebruikt.
- Schakel de ALC uit (pin 16 IC7702b aan massa).
- Voer een signaal van 315 Hz 47 mV toe aan BU-8,9
- Verlaag nu de ingangsspanning met 20 dB. Houdt de ingangsspanning gedurende de meting constant.
- Neem enkele frekwenties op tussen 40 Hz en 10 kHz.
- Gemaakte opname weergeven en de waarden in een grafiek uitzetten. De grenzen waar binnen de karakteristiek moet liggen zijn aangegeven in Fig. 10. (indien nodig voormagnetisatiestroom verhogen of verlagen, zie hoofdstuk C).



SK-F 11 5 6 7 8 9 10

1 4 3 2 1

2 0 P2

5400

FUSE 2A F 1402

2403 100n

1.2n 2406

1.2n 2405

7401 8y 225 / 100

1.2n 2401

1.2n 2402

3402 12

30V 1

LM342P15TB 7403

2 3 15V

22n 2413

og 2408 33μ

+1 31V

+3 29V

+4 14V

3401 4.7

2407 of 470μ

2410 of 1500μ

7402 1N4002G

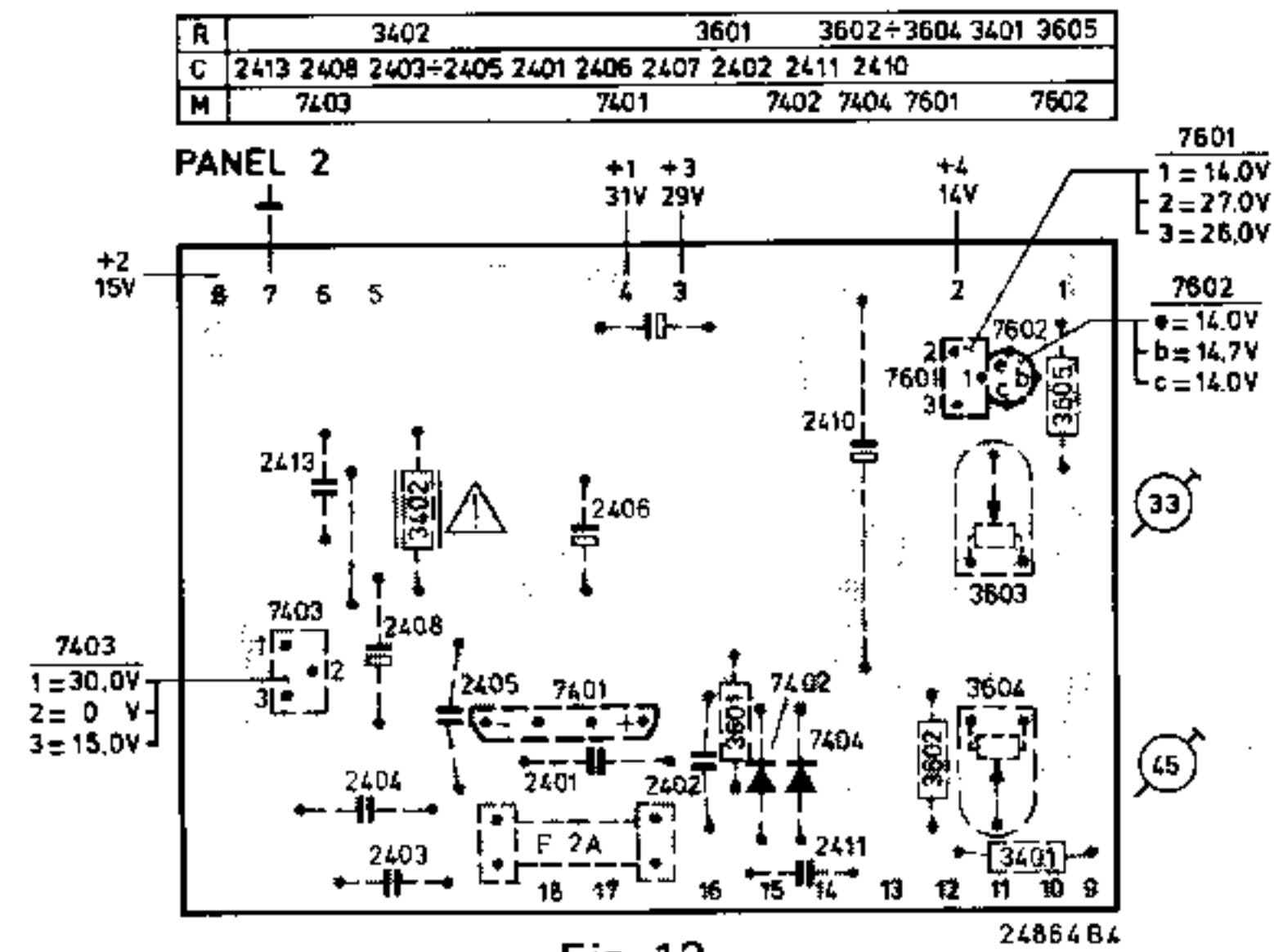
7404 1N4002G

2411 100n

| ~    | CONNECTION |     |     |
|------|------------|-----|-----|
| 110V | 2-11       | 1-3 | 2-4 |
| 127V | 5-11       | 1-3 | 2-4 |
| 220V | 4-11       | 2-3 |     |
| 240V | 5-11       | 2-3 |     |

[illegible]

27 584 D12



|      |                                                                                                                                    |                                                                     |                                                              |
|------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|
| R    | 3501÷3508                                                                                                                          | 3516 3514 3509 3512 3800 3801 3536 3535 3518 3534                   | 3513 3511 3533 3517                                          |
| C    | 2530 2532<br>2501÷2504                                                                                                             | 2506 2510 2514 2528<br>2505 2800 2508 2803 2801 2201÷2203 2525÷2527 | 2512 2511 2521÷2524 2531 2507<br>2509 2513 2529<br>2515÷2520 |
| MISC | 5401 7800 7502 7803 7813 7501<br>7812 7810 7808 7806 7804 7814 7816 7802 BU1 7201 7202 BU2 7811 7809 7801 7807 7805 7815 7817 7818 |                                                                     |                                                              |

PANEL 6

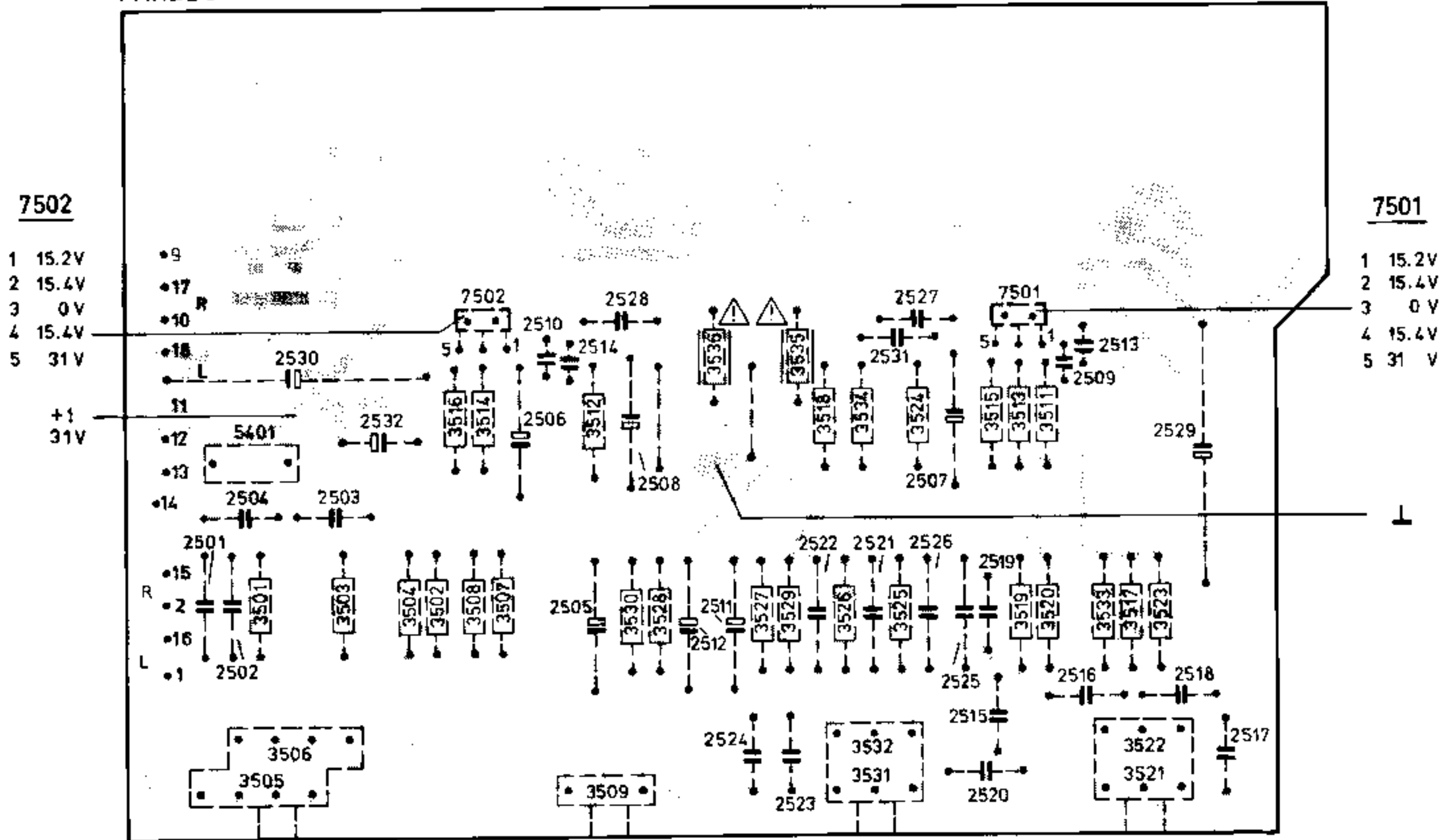


Fig. 14

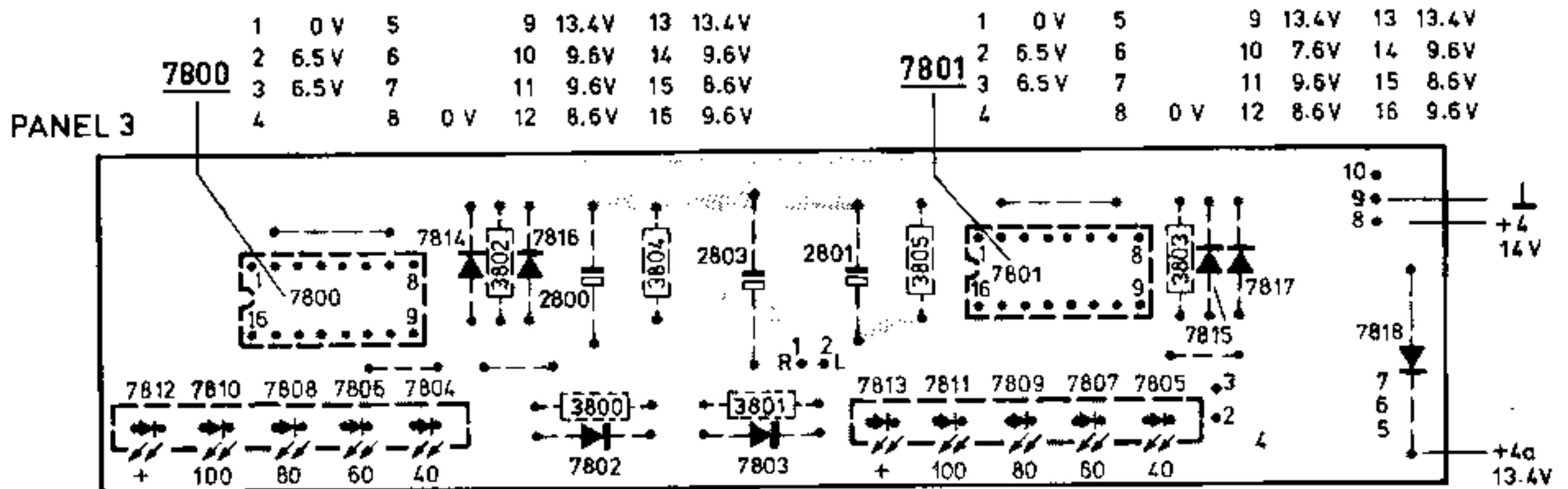


Fig. 15

TDA 2054M  
TDA 1220  
TDA 1069

TDA 2030

PANEL 5

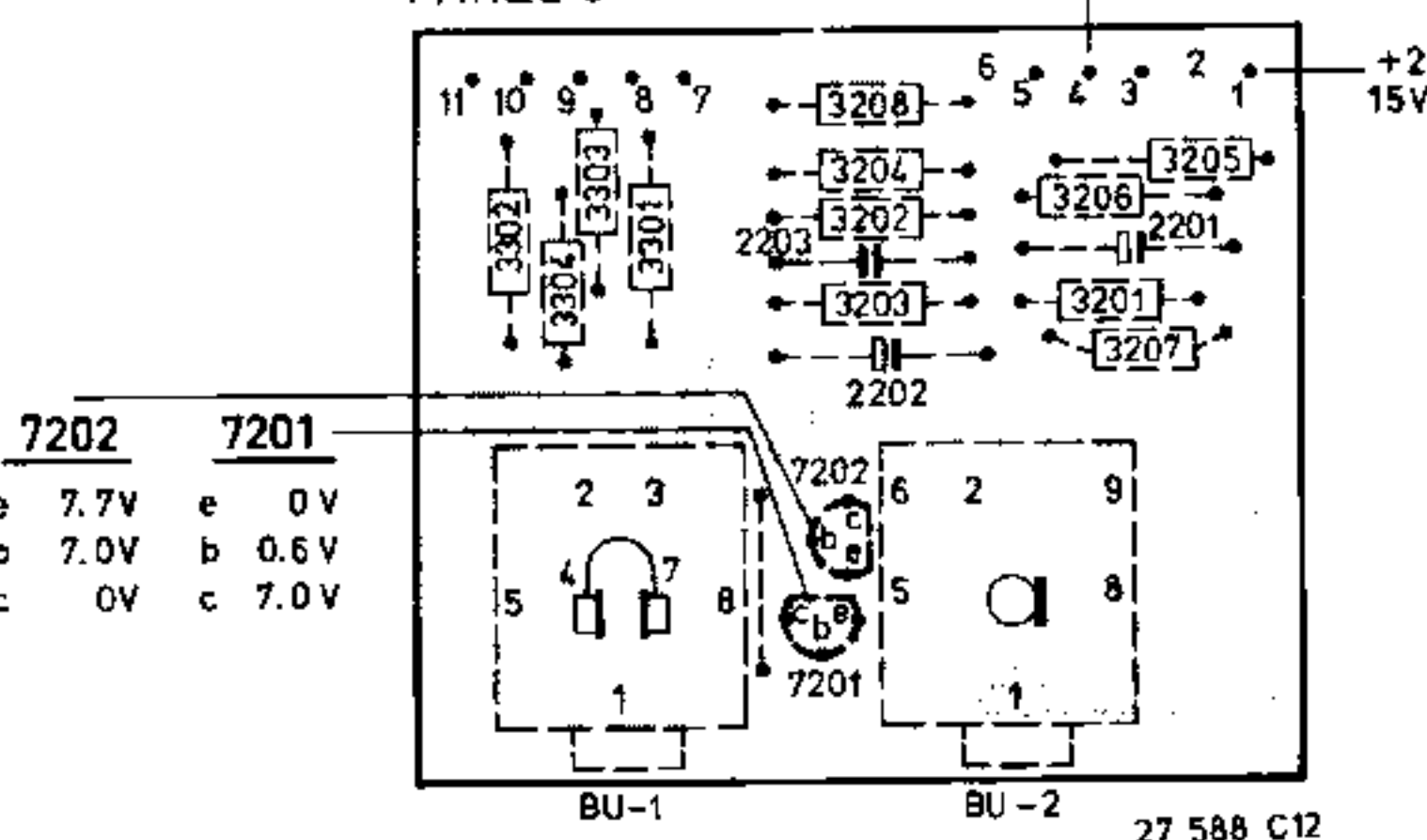
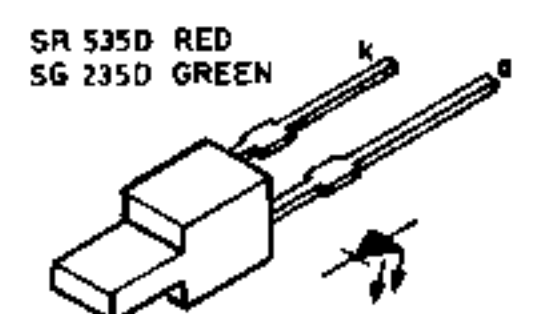
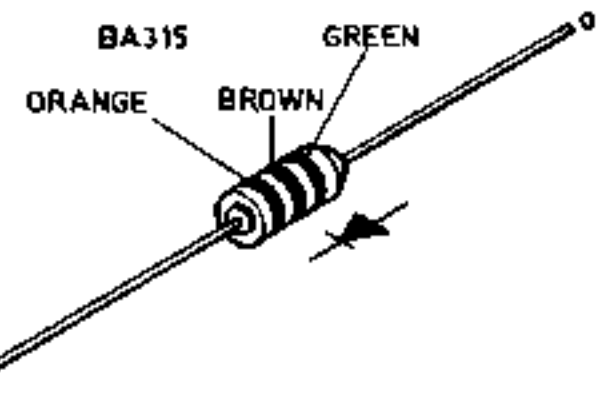


Fig. 16



BC 558  
BC 338  
BC 548 B.C  
BC 549 B.C  
BF 324

BZX79-B4V7  
IN4002G  
OA90

|      |                   |                             |      |      |                        |              |              |              |                                            |
|------|-------------------|-----------------------------|------|------|------------------------|--------------|--------------|--------------|--------------------------------------------|
| R    | 3201              | 3202 3207 3204<br>3203 3208 | 3205 | 3206 | 3501 3503<br>3502 3504 | 3505<br>3506 | 3507<br>3508 | 3509         | 3511<br>3512<br>3517 ÷ 3524                |
| C    | 2201<br>2202 2203 |                             |      |      | 2501 2503<br>2502 2504 |              |              | 2511<br>2512 | 2505<br>2506<br>2507 ÷ 2510<br>2513 ÷ 2515 |
| MISC | BU2               |                             | 7201 | 7202 |                        |              |              |              |                                            |

CIRCUIT DIAGRAM AMPLIFIER

CIRCUIT DIAGRAM MICROPHONE

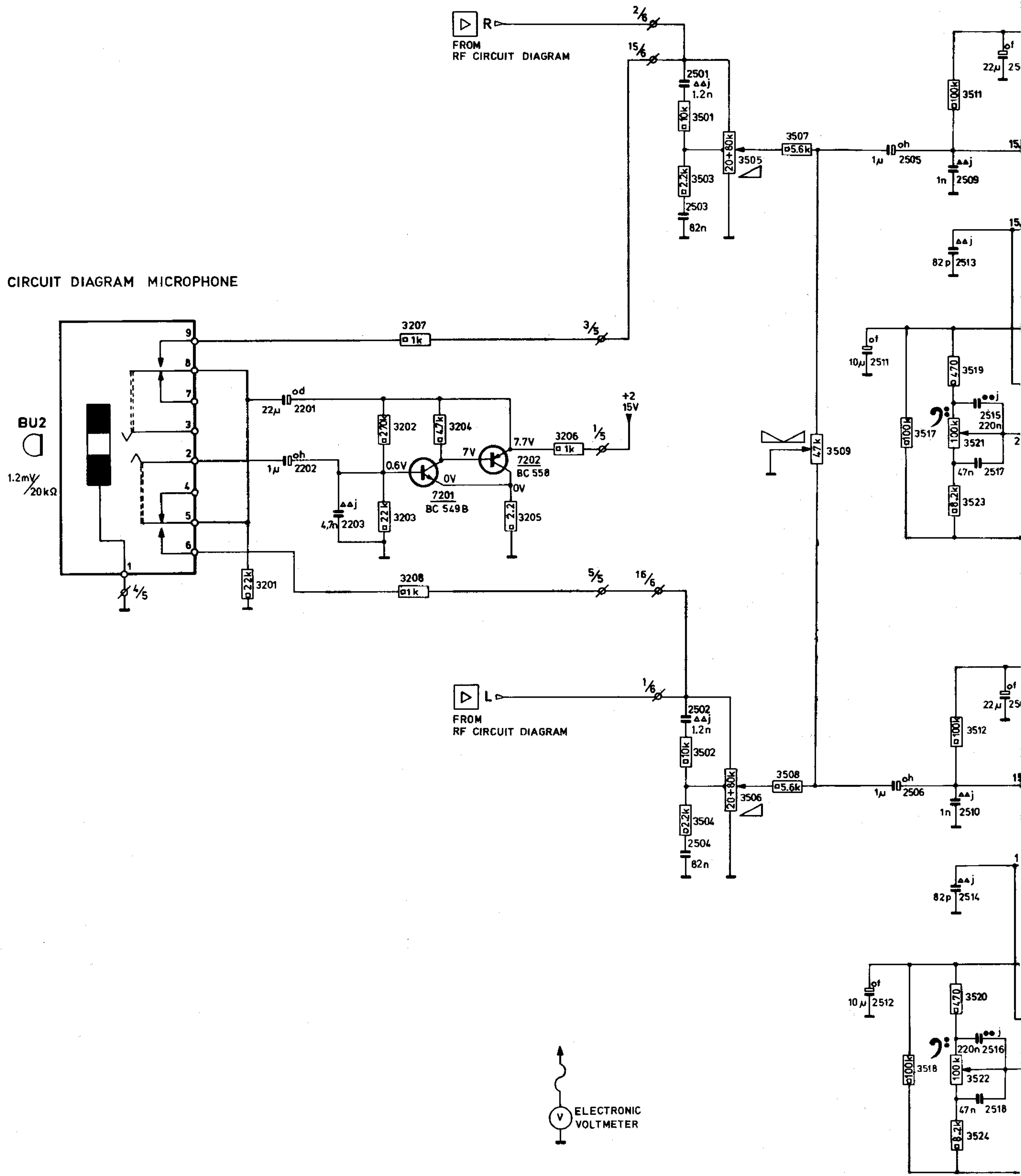
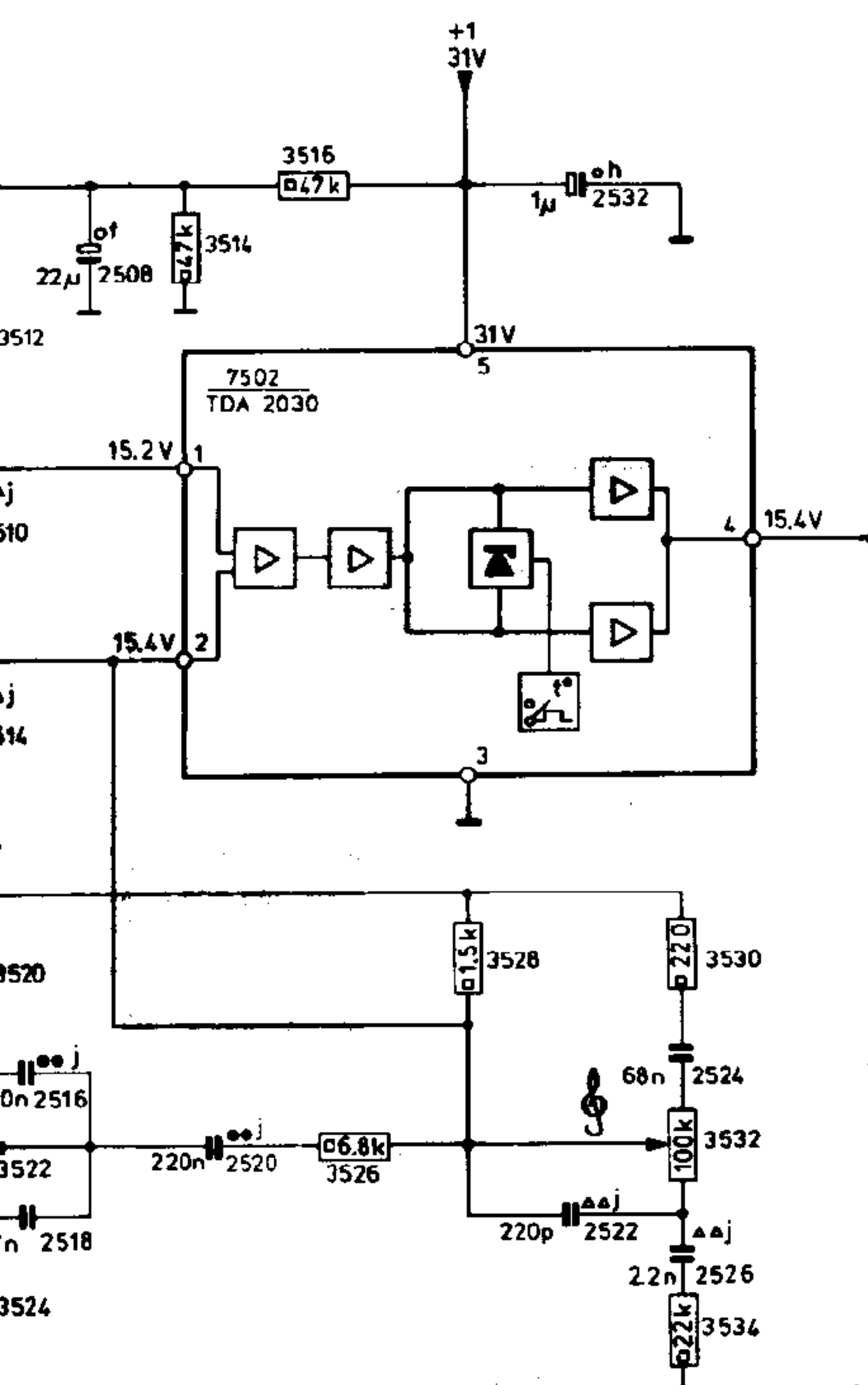
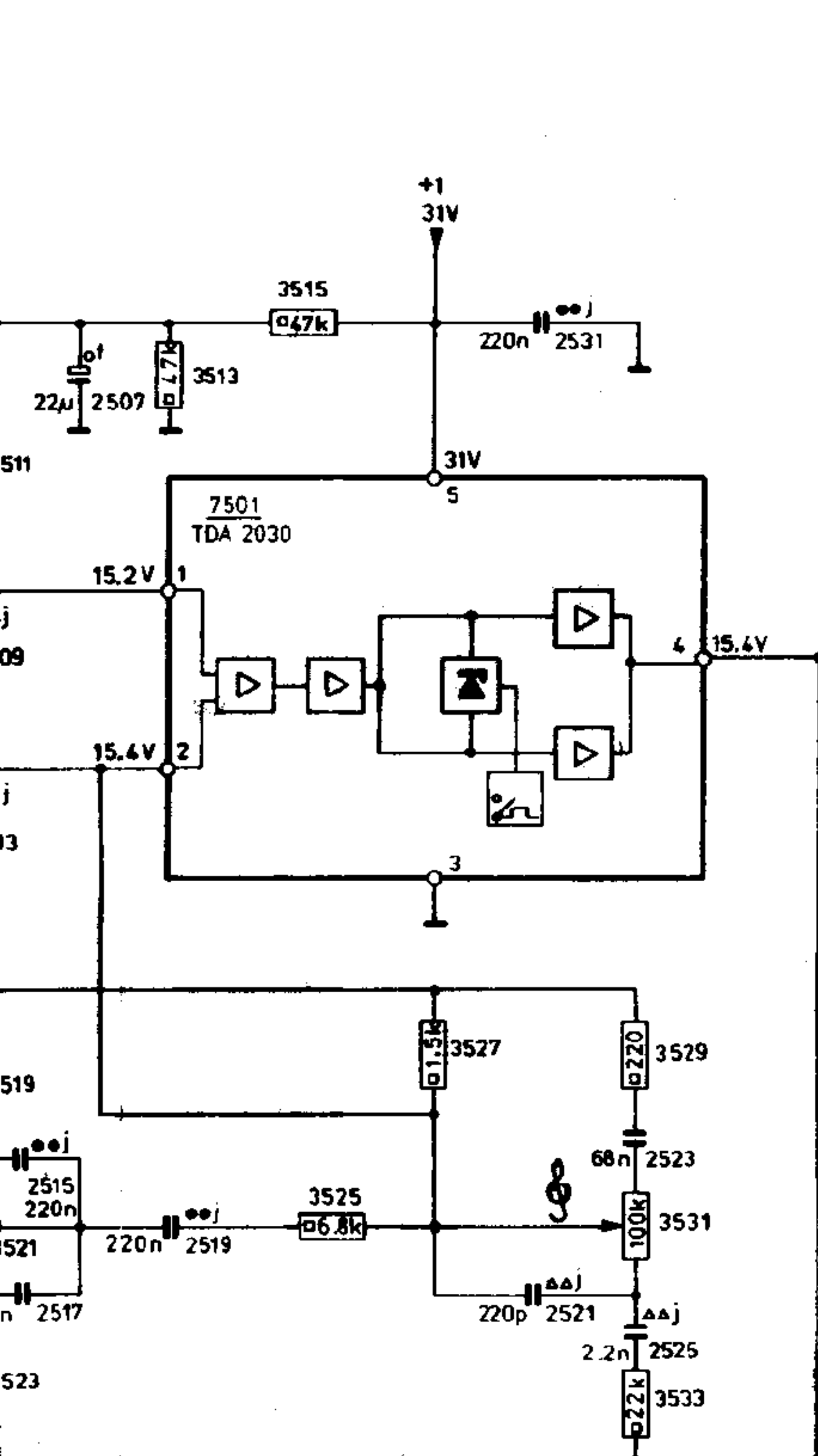
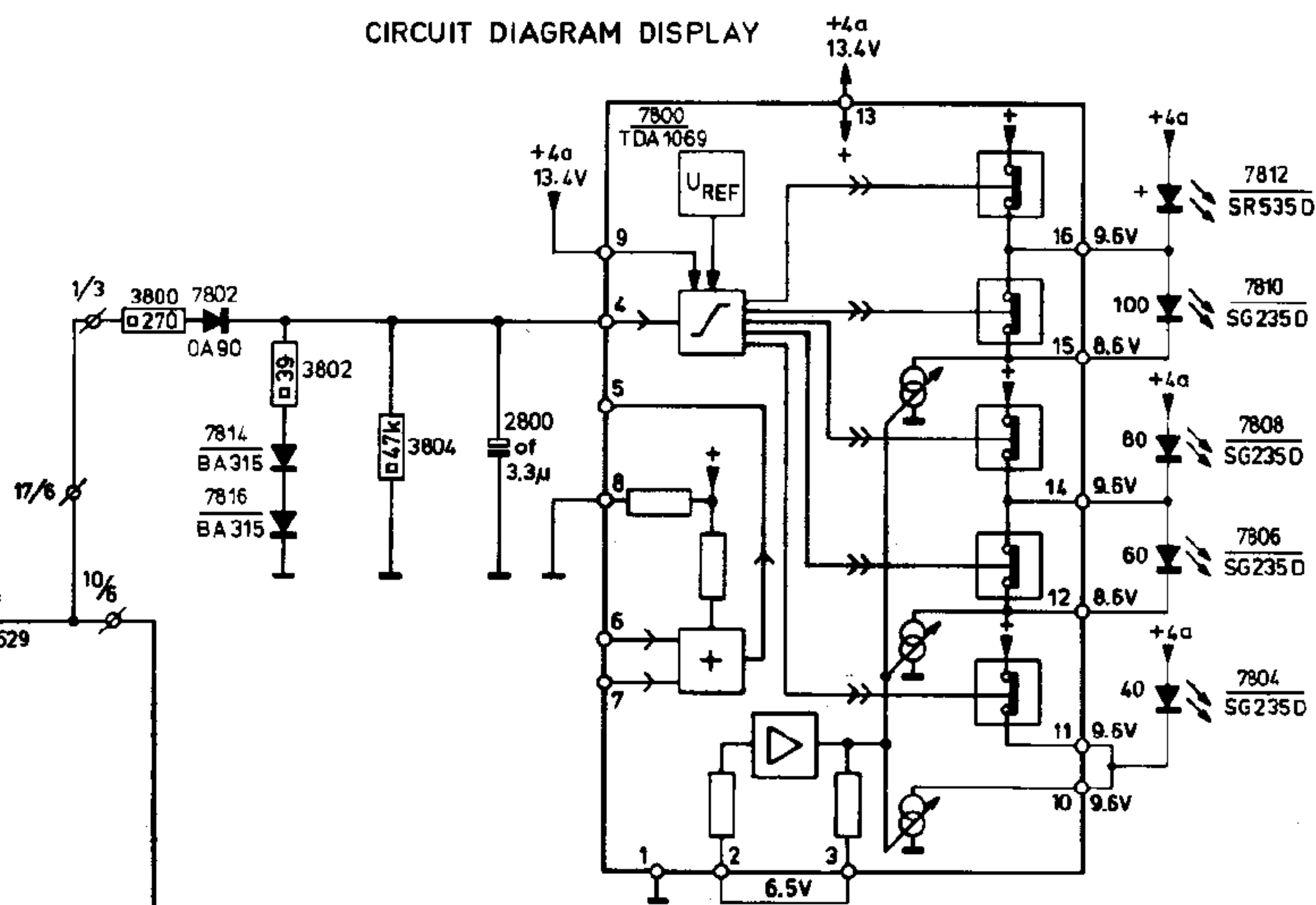


Fig. 17

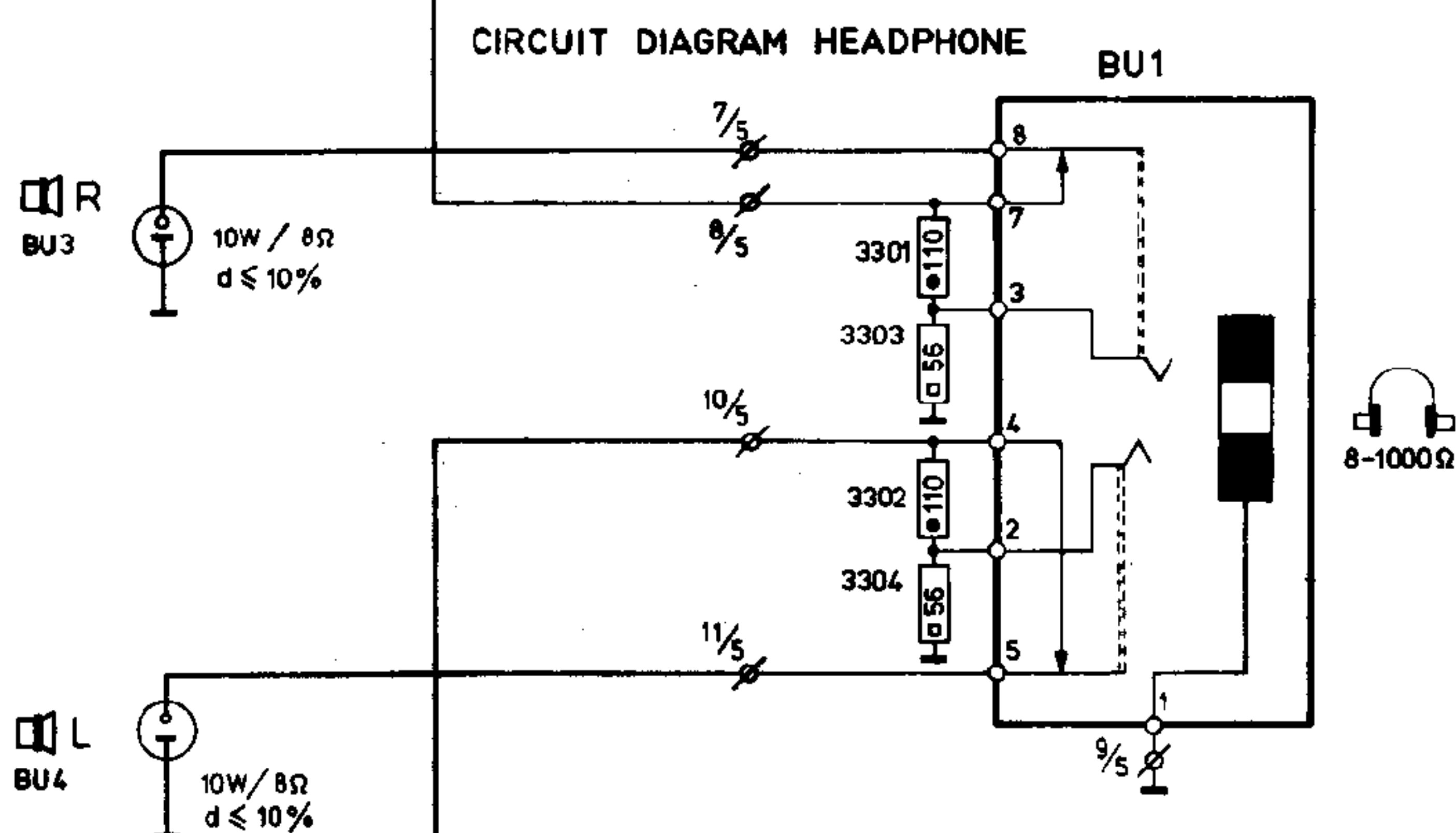
|             |      |      |      |             |      |      |      |      |             |      |                    |
|-------------|------|------|------|-------------|------|------|------|------|-------------|------|--------------------|
| 3513        | 3515 | 3525 | 3527 | 3529        | 3531 | 3533 | 3535 | 3800 | 3802        | 3804 | 3301 ÷ 3304        |
| 3514        | 3516 | 3526 | 3528 | 3530        | 3532 | 3534 | 3536 | 3801 | 3803        | 3805 |                    |
| 07 ÷ 2510   |      |      |      | 2531        |      |      | 2527 | 2529 |             |      | 2800               |
| 2513 ÷ 2518 | 2519 |      |      | 2521 ÷ 2526 |      |      | 2528 | 2530 |             |      | 2801               |
|             | 2520 |      |      | 2532        |      |      |      |      |             |      | 2803               |
| 7501        |      |      |      |             |      |      | BU4  |      | 7802        |      | 7800               |
|             |      |      |      |             |      |      |      |      | 7814 ÷ 7817 |      |                    |
| 7502        |      |      |      |             |      |      | BU3  |      | 7803        |      | 7801 BU1           |
|             |      |      |      |             |      |      |      |      |             |      | 7804 ÷ 7813        |
|             |      |      |      |             |      |      |      |      |             |      | 5401 7818 DIAL-LED |



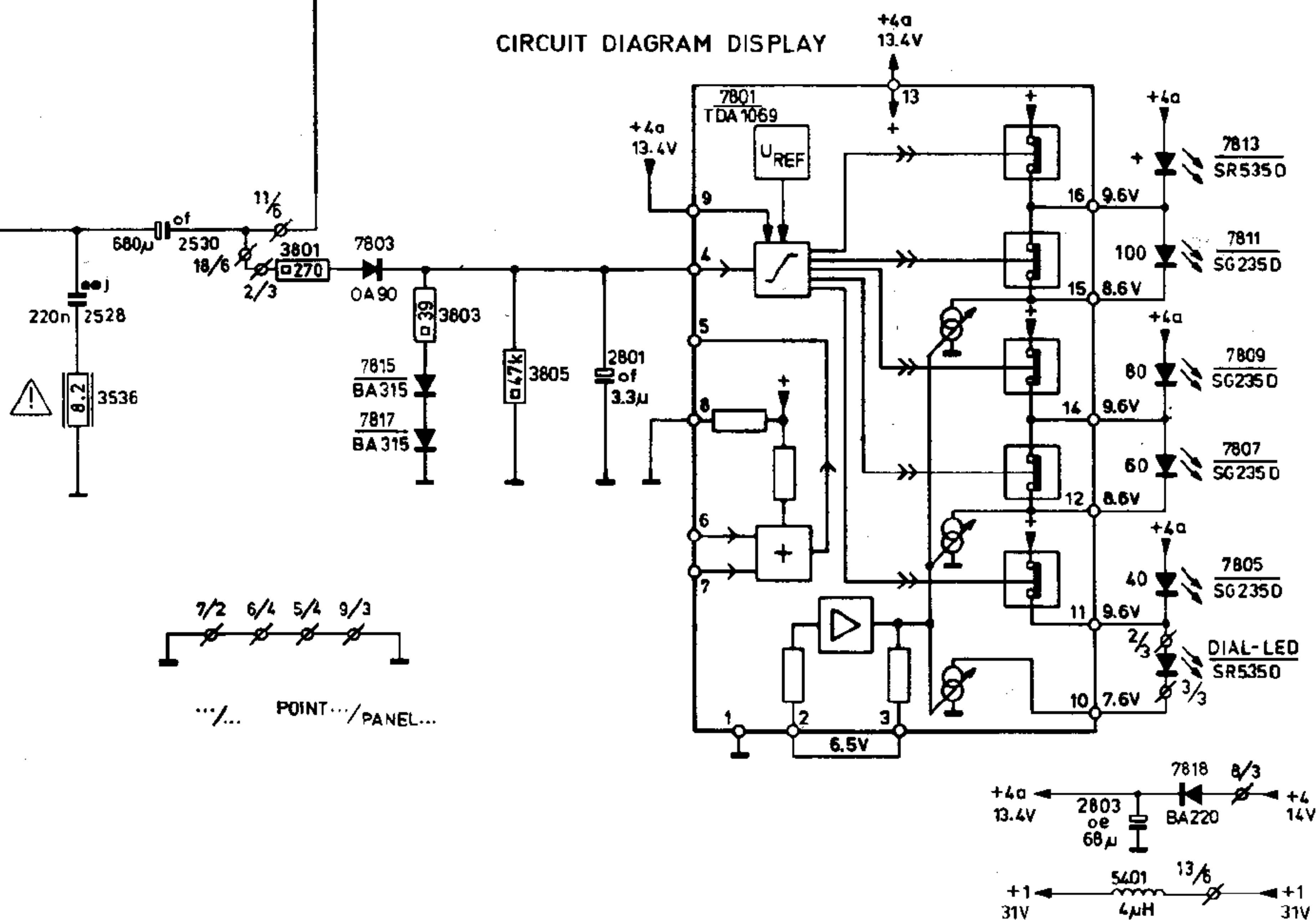
CIRCUIT DIAGRAM DISPLAY



CIRCUIT DIAGRAM HEADPHONE



CIRCUIT DIAGRAM DISPLAY



| R     | 3803                         | 3805                                    | 3401 3602+3605            | 3601                                                                   | 3804 3800    | 3601         | 3802                        | 3046 3045 | 3402 | 3201+3208      | 3301      | 3777 |
|-------|------------------------------|-----------------------------------------|---------------------------|------------------------------------------------------------------------|--------------|--------------|-----------------------------|-----------|------|----------------|-----------|------|
| C     | 2721 2722                    |                                         | 2801                      | 2803                                                                   | 2410 2411    | 2800         | 2038                        | 2401+2408 | 2413 | 2201           | 2202 2203 |      |
| MISC. | M2 SK-G SK-H<br>SK-D<br>7818 | 7817 7815 7805 7807 7801 7809 7811 7813 | SK-F<br>7802 7801<br>7803 | 7000 BU-5<br>7404 7402<br>7802 7816 7814 7804 7806 7800 7808 7810 7812 | BU-6<br>7401 | BU-7<br>7401 | BU-8 BU-4 BU-9 BU-3<br>7403 |           |      | BU-2 7202 7201 | BU        |      |

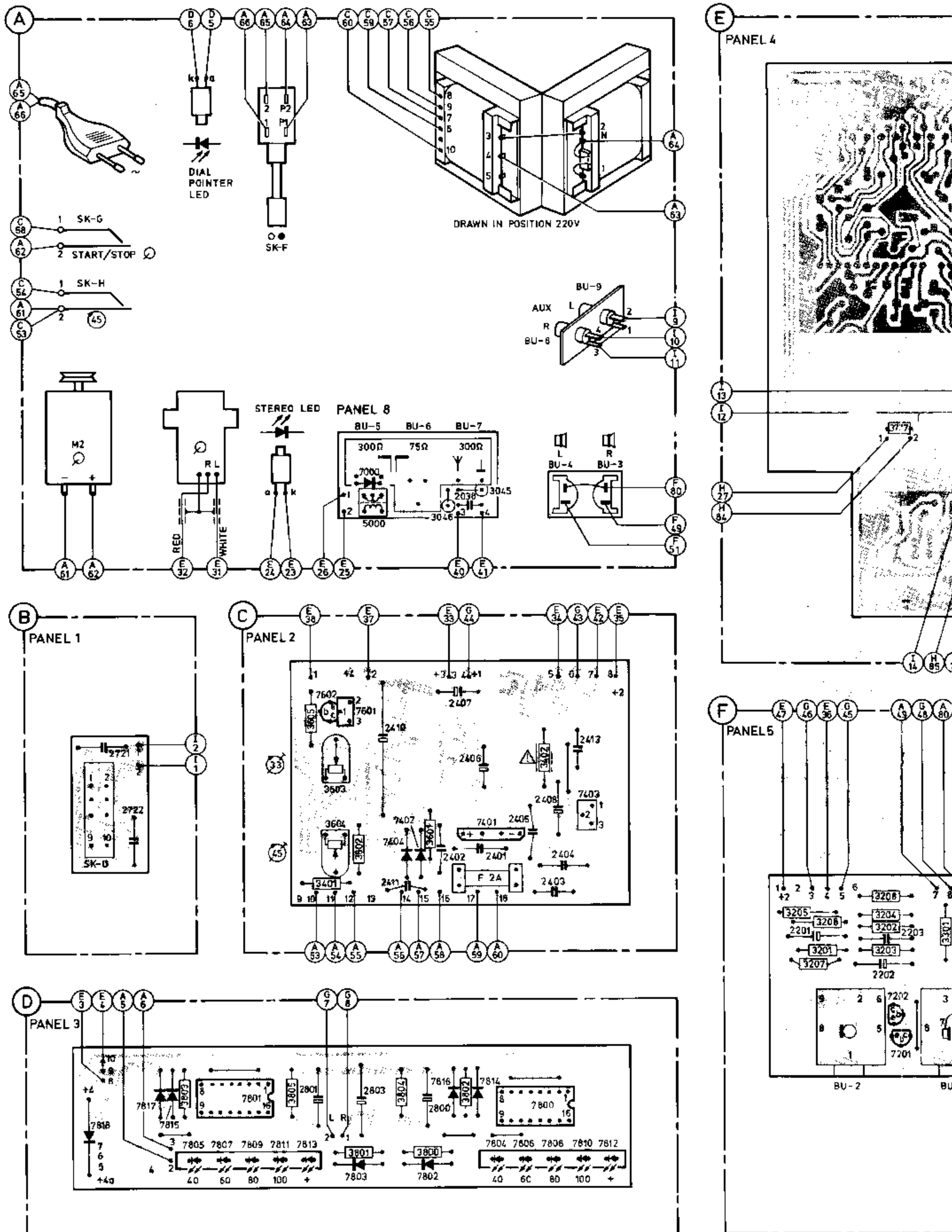
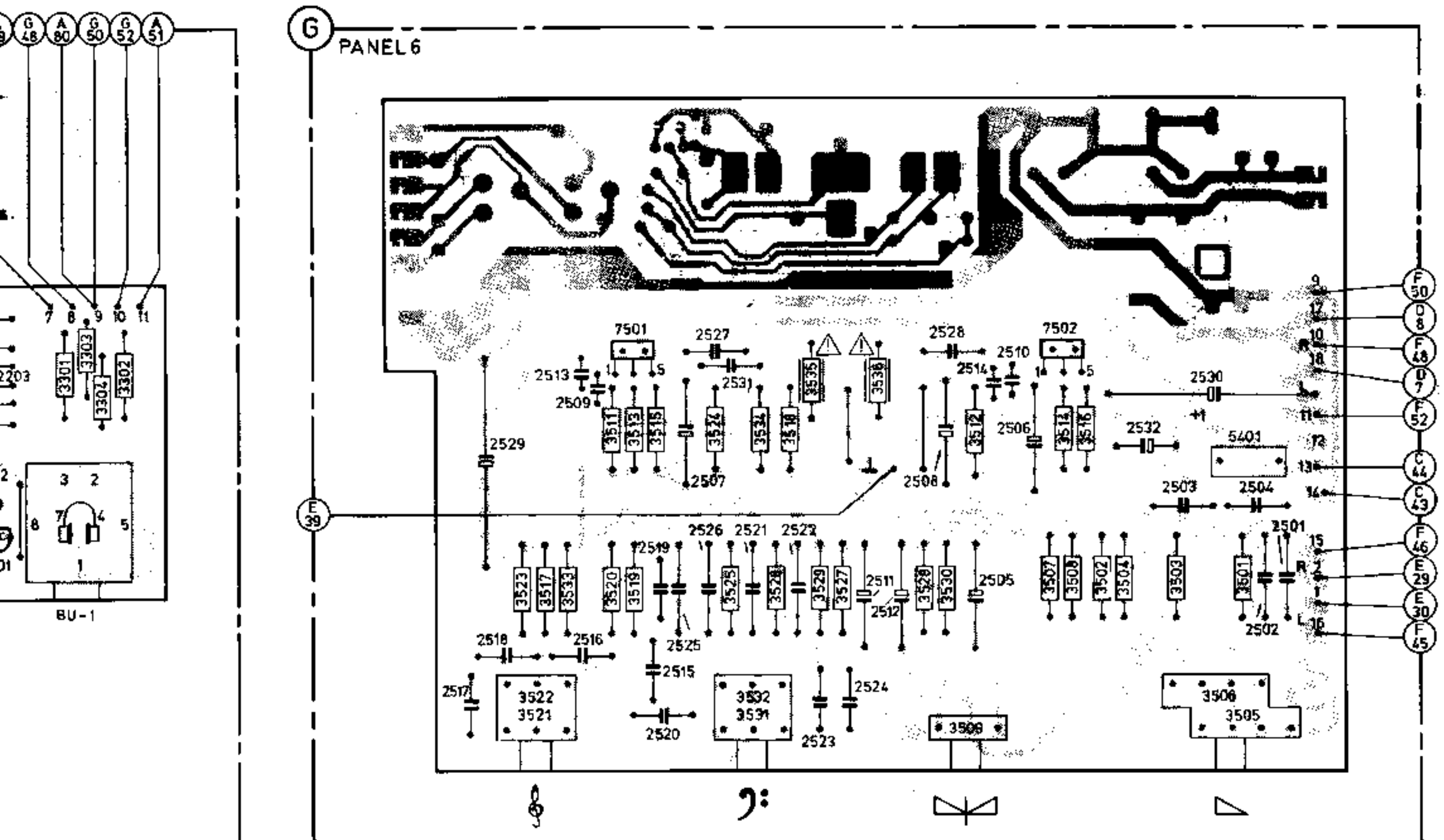
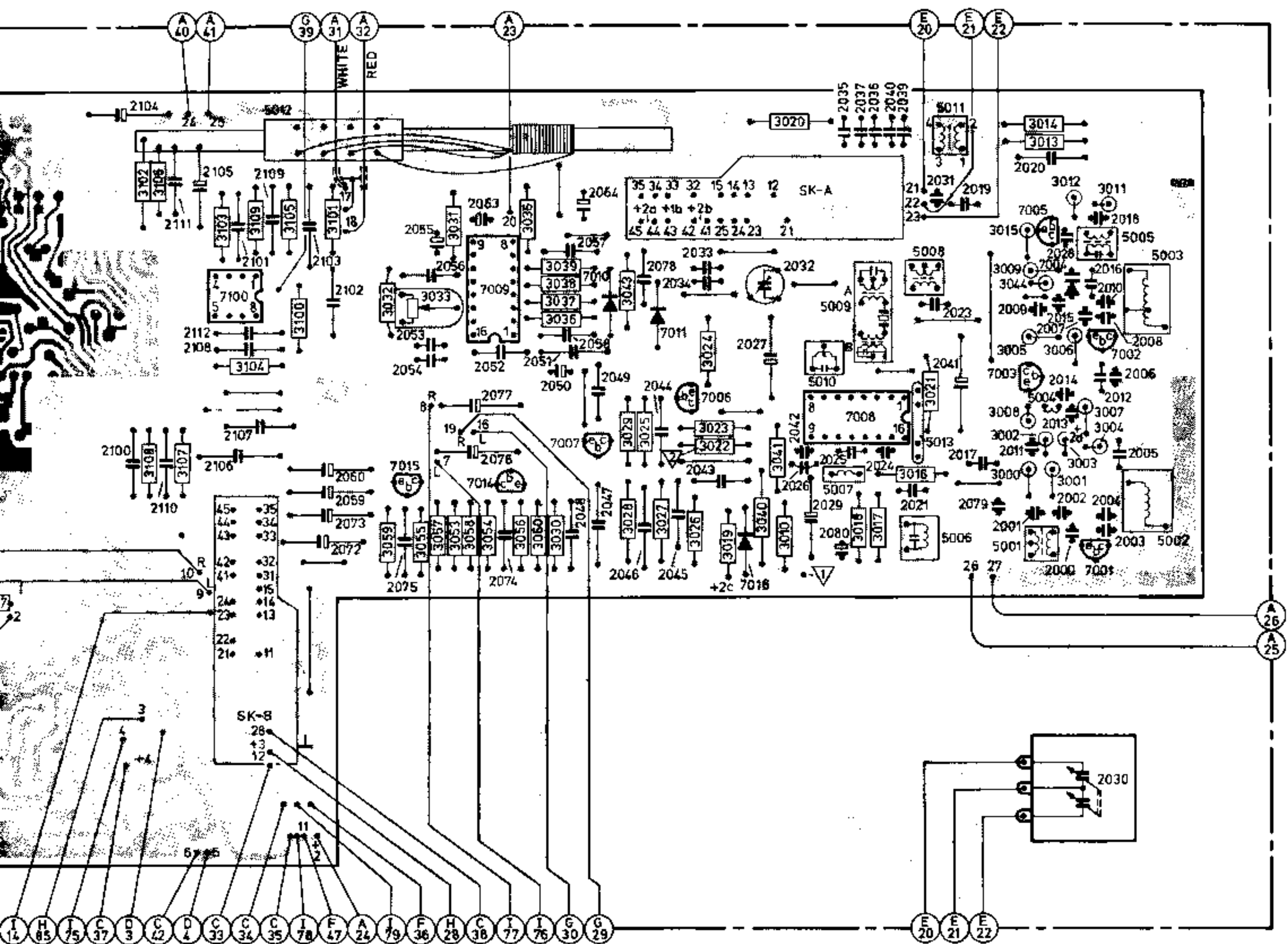


Fig.



|            |    |                     |                               |                                                   |                                                                  |           |                                                        |      |
|------------|----|---------------------|-------------------------------|---------------------------------------------------|------------------------------------------------------------------|-----------|--------------------------------------------------------|------|
| MISC       | K2 | 7704 7703           | K1 SK-C 7709                  | 7708 7707 4503                                    | 7706 7705 SK-E                                                   | SK-I 7702 | 7701                                                   | M1   |
| C          |    | 2713+2718 2735 2738 | 2719 2720 2734 2723-2727 2743 | 2730 2732 2731 2736 2737 2744 2701 2728 2702 2712 | 2733 2704 2706 2708 2710 2711 2761 2709 2703 2707 2705 2729 2742 |           |                                                        |      |
| R3701+3738 |    | 3725+3732           | 3723 3724 3733 3734           | 3738                                              | 3737                                                             | 3788      | 3702 3706 3708 3703+3705 3709 3710 3702 3712+3722 3711 |      |
| R3739+3775 |    | 3774                | 3773 3775 3767 3747           | 3748 3751+3753 3769+3772                          | 3739+3744 3754+3758 3749 3750 3761 3762 3766                     | 3765      | 3768                                                   | 3763 |

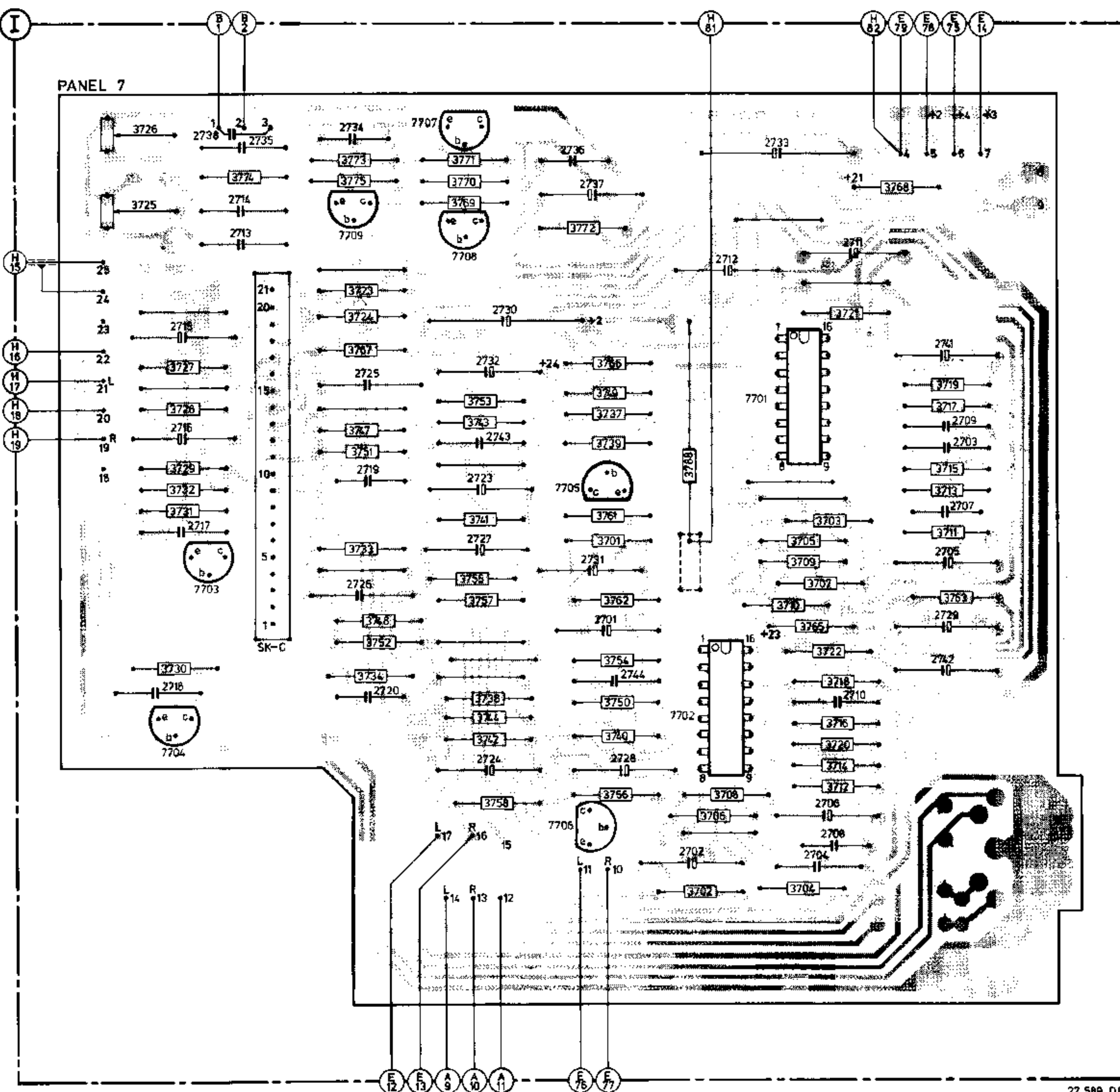
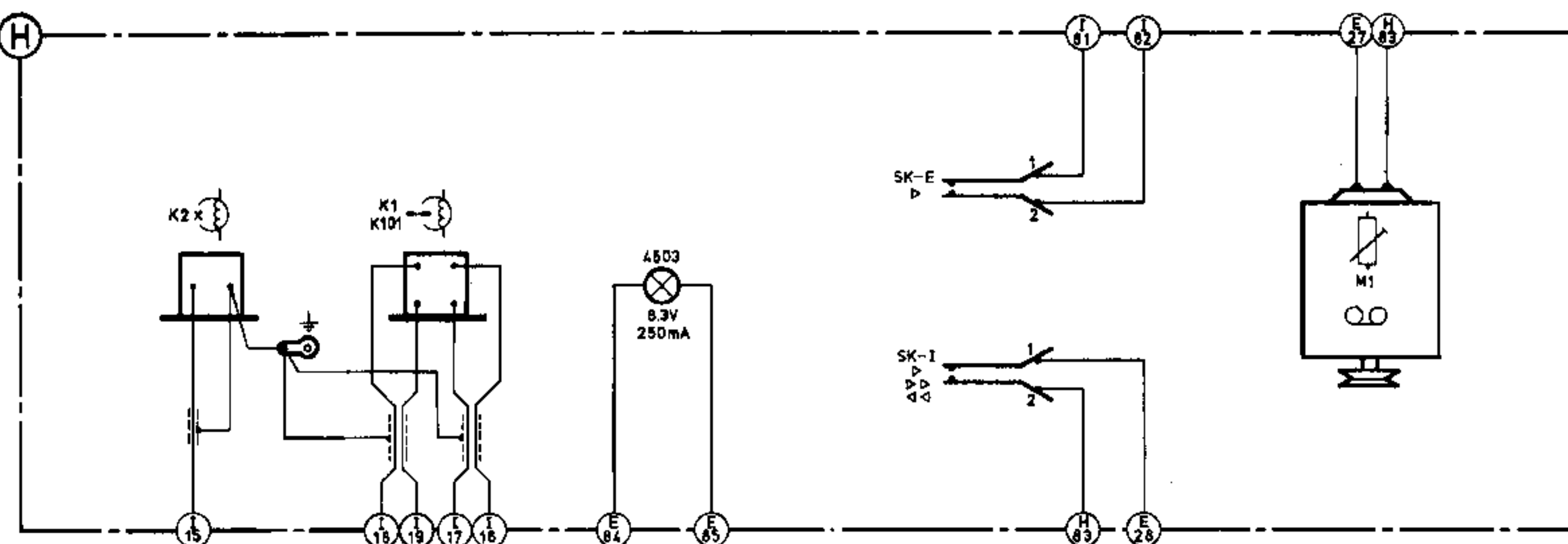


Fig. 19

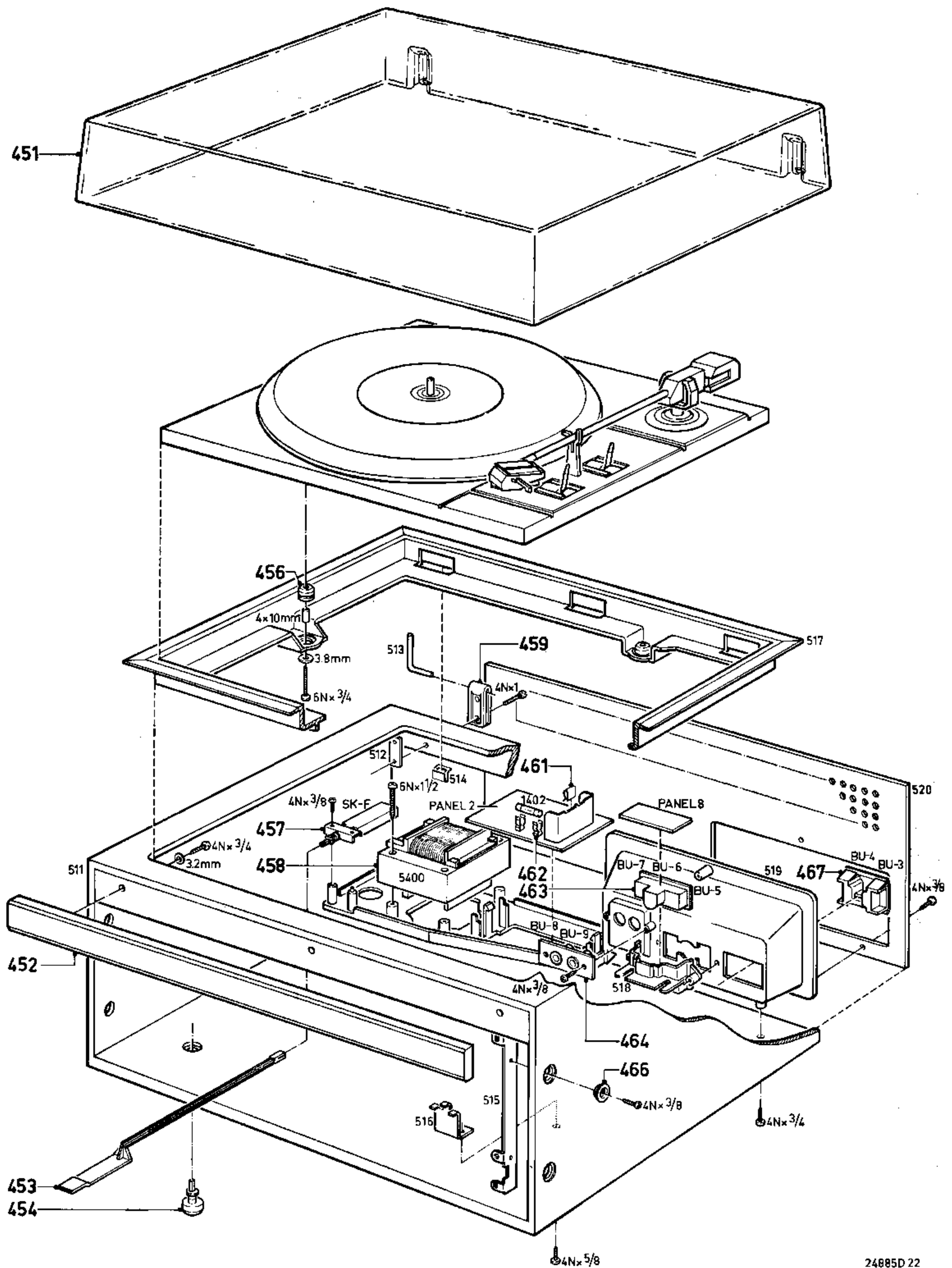


Fig. 20

24885D 22

|     |                     |     |                |     |                |
|-----|---------------------|-----|----------------|-----|----------------|
| 451 | 4822 426 60205      | 456 | 4822 462 71016 | 462 | 4822 492 60063 |
| 452 | 4822 426 50509      | 457 | 4822 271 30253 | 463 | 4822 265 40145 |
|     | 4822 426 50521 -/48 | 458 | 4822 146 20647 | 464 | 4822 267 40422 |
| 453 | 4822 413 30996      | 459 | 4822 417 10613 | 466 | 4822 426 60204 |
| 454 | 4822 462 71236      | 461 | 4822 492 62497 | 467 | 4822 267 20123 |

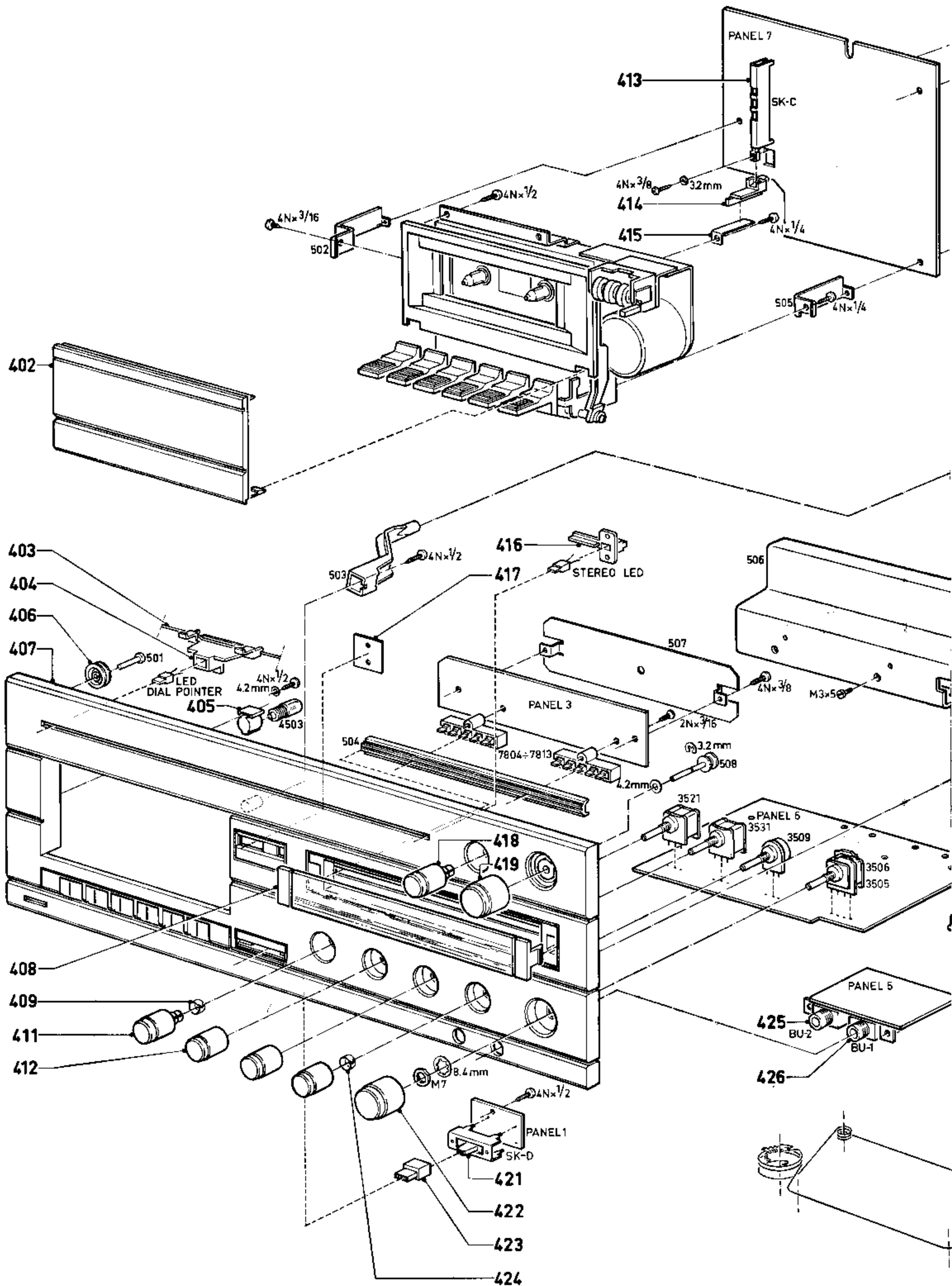
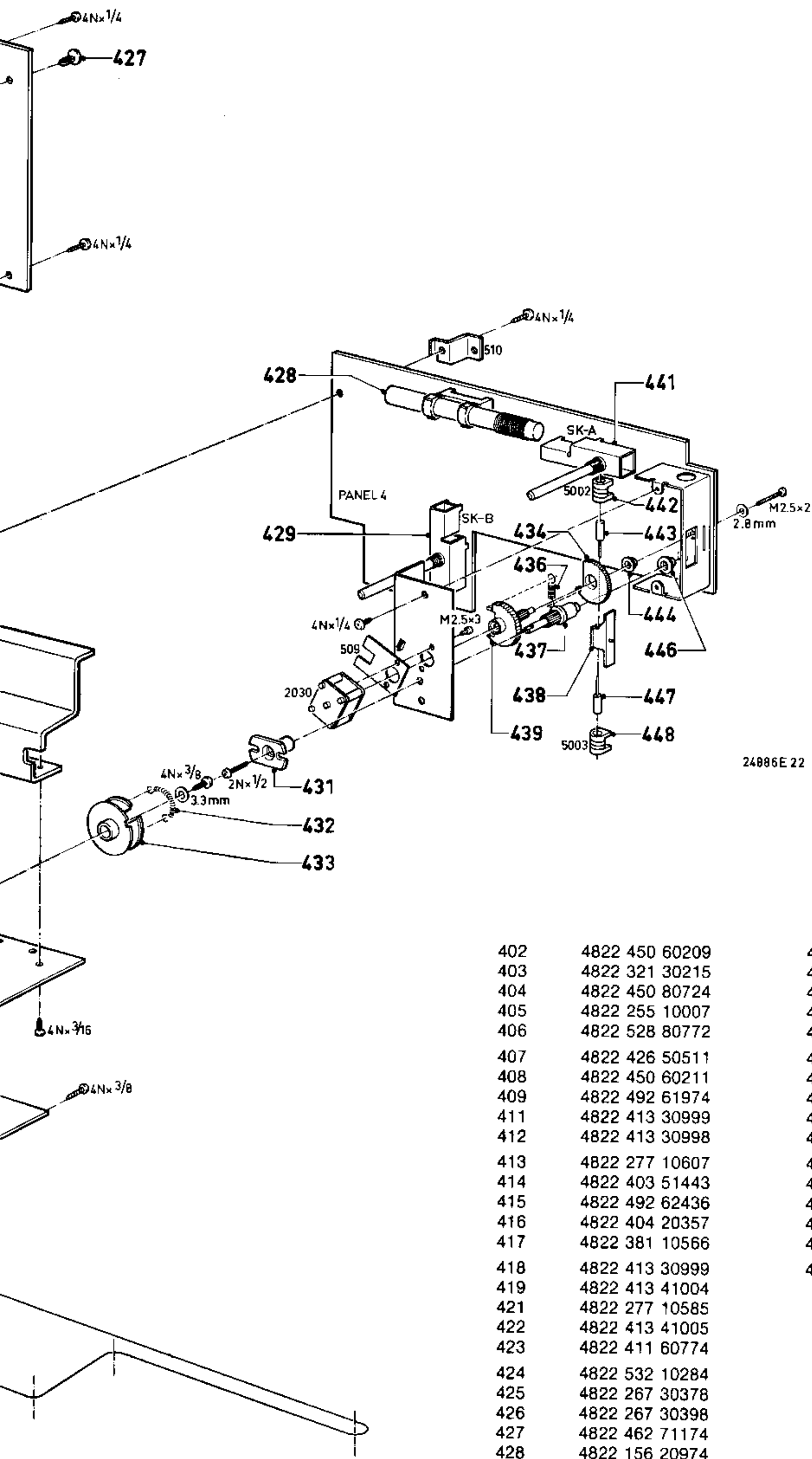
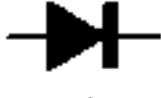
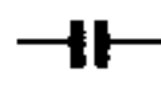
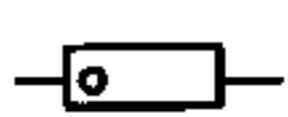
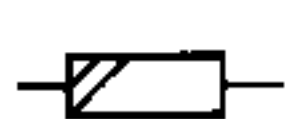
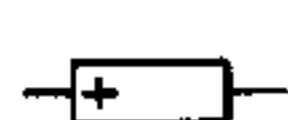


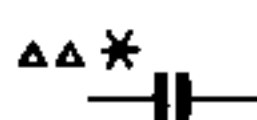
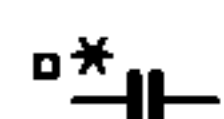
Fig. 21



|     |                |     |                |
|-----|----------------|-----|----------------|
| 402 | 4822 450 60209 | 429 | 4822 273 30271 |
| 403 | 4822 321 30215 | 431 | 4822 528 80861 |
| 404 | 4822 450 80724 | 432 | 4822 492 51284 |
| 405 | 4822 255 10007 | 433 | 4822 528 80862 |
| 406 | 4822 528 80772 | 434 | 4822 528 60132 |
| 407 | 4822 426 50511 | 436 | 4822 492 31581 |
| 408 | 4822 450 60211 | 437 | 4822 535 91231 |
| 409 | 4822 492 61974 | 438 | 4822 522 31195 |
| 411 | 4822 413 30999 | 439 | 4822 522 31306 |
| 412 | 4822 413 30998 | 441 | 4822 273 30269 |
| 413 | 4822 277 10607 | 442 | 4822 156 20691 |
| 414 | 4822 403 51443 | 443 | 4822 526 10172 |
| 415 | 4822 492 62436 | 444 | 4822 532 80669 |
| 416 | 4822 404 20357 | 446 | 4822 532 80671 |
| 417 | 4822 381 10566 | 447 | 4822 156 30805 |
| 418 | 4822 413 30999 | 448 | 4822 156 20692 |
| 419 | 4822 413 41004 |     |                |
| 421 | 4822 277 10585 |     |                |
| 422 | 4822 413 41005 |     |                |
| 423 | 4822 411 60774 |     |                |
| 424 | 4822 532 10284 |     |                |
| 425 | 4822 267 30378 |     |                |
| 426 | 4822 267 30398 |     |                |
| 427 | 4822 462 71174 |     |                |
| 428 | 4822 156 20974 |     |                |

| -D-    |                      |                | -C-     |                          |                |
|-----------------------------------------------------------------------------------------|----------------------|----------------|--------------------------------------------------------------------------------------------|--------------------------|----------------|
| BA216                                                                                   |                      | 4822 130 30702 | 2030                                                                                       | Varco 335 pF+335 pF      | 4822 125 50112 |
| BA220                                                                                   |                      | 4822 130 34221 | 2032                                                                                       | Trimmer 20 pF            | 4822 125 50045 |
| BA315                                                                                   |                      | 4822 130 30843 | 2043                                                                                       | Foil 100 nF              | 4822 121 41261 |
| BA317                                                                                   |                      | 4822 130 30847 | 2047                                                                                       | Foil 6.8 nF              | 4822 121 50538 |
| BB117                                                                                   |                      | 4822 130 30913 | 2050                                                                                       | Tantal 2.2 $\mu$ F-16 V  | 4822 124 10204 |
| BY225-100                                                                               |                      | 4822 130 50312 | 2052                                                                                       | Foil 50 nF               | 4822 121 41262 |
| OA90G                                                                                   |                      | 4822 130 31423 | 2057,2058                                                                                  | Foil 12 nF               | 4822 121 40405 |
| SG235D                                                                                  | green                | 4822 130 31518 | 2055,2063                                                                                  | Tantal 0.47 $\mu$ F-25 V | 5322 124 14123 |
| SR535D                                                                                  | red                  | 4822 130 31463 | 2064                                                                                       | Tantal 2.2 $\mu$ F-16 V  | 4822 124 10204 |
| 1N4002                                                                                  |                      | 5322 130 30684 | 2078                                                                                       | Foil 22 nF               | 4822 121 40407 |
| -S-    |                      |                | 2080                                                                                       | Tantal 0.47 $\mu$ F-25 V | 5322 124 14123 |
| 5000                                                                                    | BALUN transformer    | 4822 142 50131 | 2110,2111                                                                                  | Foil 2.7 nF              | 5322 121 54065 |
| 5001                                                                                    | FM ant. coil         | 4822 142 50131 | 2112                                                                                       | Foil 100 nF              | 4822 121 41261 |
| 5002                                                                                    | FM R.F. coil         | 4822 156 20691 | 2403                                                                                       | Foil 100 nF              | 4822 121 41261 |
| 5003                                                                                    | FM osc coil          | 4822 156 20692 | 2406                                                                                       | Elco 3300 $\mu$ F        | 4822 124 40401 |
| 5004                                                                                    | FM coil              | 4822 153 10296 | 2411                                                                                       | Foil 100 nF              | 4822 121 41261 |
| 5005                                                                                    | FM IF coil           | 4822 153 60088 | 2413                                                                                       | Foil 22 nF               | 4822 121 40407 |
| 5006                                                                                    | FM det coil          | 4822 153 60088 | 2503,2504                                                                                  | Foil 82 nF               | 4822 121 41158 |
| 5007                                                                                    | FM coil              | 4822 157 50962 | 2517,2518                                                                                  | Foil 47 nF               | 4822 121 40239 |
| 5008                                                                                    | AM ant. coil         | 4822 156 30564 | 2523,2524                                                                                  | Foil 68 nF               | 4822 121 41156 |
| 5009                                                                                    | 452 kHz filter       | 4822 242 70358 |                                                                                            |                          |                |
|                                                                                         | 468 kHz filter       | 4822 242 70306 | -TS-  |                          |                |
| 5010                                                                                    | AM det. coil         | 4822 156 30673 | BC338                                                                                      |                          | 4822 130 44121 |
| 5011                                                                                    | AM osc. coil         | 4822 156 20975 | BC548B                                                                                     |                          | 4822 130 40937 |
| 5012                                                                                    | Ferroceptor          | 4822 156 20974 | BC548C                                                                                     |                          | 4822 130 44196 |
| 5013                                                                                    | 10.7 MHz filter      | 4822 242 70287 | BC549B                                                                                     |                          | 4822 130 40936 |
| 5401                                                                                    | Coil 4 $\mu$ H       | 4822 157 50718 | BC549C                                                                                     |                          | 4822 130 44246 |
|                                                                                         |                      |                | BC558                                                                                      |                          | 4822 130 40941 |
| -R-  |                      |                | BF240                                                                                      |                          | 4822 130 40902 |
| 3033                                                                                    | Trimpotm. 4K7        | 4822 100 10036 | BF324                                                                                      |                          | 4822 130 41448 |
| 3045                                                                                    | VDR                  | 4822 116 20073 | -IC-  |                          |                |
| 3401                                                                                    | Safety res. 4E7      | 4822 111 30499 | LM1800                                                                                     |                          | 4822 209 80692 |
| 3402                                                                                    | Safety res. 12E      | 4822 111 30255 | LM342p-15                                                                                  |                          | 4822 209 80388 |
| 3505,3506                                                                               | Potm. 20+80 K volume | 4822 102 10177 | LM387N                                                                                     |                          | 4822 209 80973 |
| 3509                                                                                    | Potm. 47 K balance   | 4822 100 10401 | TDA1059                                                                                    |                          | 4822 209 80361 |
| 3521,3522                                                                               | Potm. 100 K bass     | 4822 100 10402 | TDA1069                                                                                    |                          | 4822 209 80375 |
| 3531,3532                                                                               | Potm. 100 K treble   | 4822 100 10402 | TDA1220                                                                                    |                          | 4822 209 80536 |
| 3535,3536                                                                               | Safety res. 8E2      | 4822 111 30451 | TDA2030                                                                                    |                          | 4822 209 80831 |
| 3601                                                                                    | Metal film res. 150E | 5322 116 54486 | TDA2054M                                                                                   |                          | 4822 209 80694 |
| 3603                                                                                    | Potm. 2K2            | 4822 100 10237 | -Miscellaneous-                                                                            |                          |                |
| 3604                                                                                    | Potm. 220E           | 4822 100 10019 | Lamp                                                                                       | 6.3 V-250 mA             | 4822 134 40007 |
| 3725,3726                                                                               | Trimpotm. 100 K      | 4822 100 10052 | Transformer                                                                                |                          | 4822 146 20647 |
|                                                                                         |                      |                | Transformer-                                                                               |                          |                |
|                                                                                         |                      |                | fuse                                                                                       |                          | 4822 252 20007 |
|                                                                                         |                      |                | Fuse                                                                                       | 2A F                     | 4822 253 20023 |

|                                                                                     |                  |                                                   |             |
|-------------------------------------------------------------------------------------|------------------|---------------------------------------------------|-------------|
|    | SPRING RESISTOR  |                                                   |             |
|    | SAFETY RESISTOR  |                                                   |             |
|    | 0.2 W<br>(CR16)  | $< 220\text{k}\Omega$<br>$> 270\text{k}\Omega$    | 5 %<br>10 % |
|    | 0.33 W<br>(CR25) | $\leq 1\text{M}\Omega$<br>$> 1\text{M}\Omega$     | 5 %<br>10 % |
|   | 0.5 W<br>(CR37)  | $\leq 1\text{M}\Omega$<br>$> 1\text{M}\Omega$     | 5 %<br>10 % |
|  | 0.67 W<br>(CR52) | $\leq 1\text{M}\Omega$<br>$> 1\text{M}\Omega$     | 5 %<br>10 % |
|  | 1.15 W<br>(CR68) | $\leq 1.6\text{M}\Omega$<br>$> 1.6\text{M}\Omega$ | 5 %<br>10 % |
|  | 0.5 W<br>(VR37)  | HIGH VOLTAGE<br>RESISTOR 5 %                      |             |
|  | 4 W<br>(WR0617)  | WIRE WOUND<br>RESISTOR 5 %                        |             |
|  | 7 W<br>(WR0825)  | WIRE WOUND<br>RESISTOR 5 %                        |             |
|  | 11 W<br>(WR0842) | WIRE WOUND<br>RESISTOR 5 %                        |             |

|                                                                                                                                                                                                                                                                                                                                                                                                       |                     |            |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------|--|-------------|----------|-----------|---------|----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|------------|
|                                                                                                                                                                                                                                                                                                                    | CERAMIC PLATE       |            |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
|                                                                                                                                                                                                                                                                                                                    | POLYESTER FLAT FILM |            |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
|                                                                                                                                                                                                                                                                                                                    | POLYESTER MEPOLESCO |            |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
|                                                                                                                                                                                                                                                                                                                    | SINGLE ELCO         |            |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
| <table><tr><td>* a = 2.5 V</td><td>g = 40 V</td><td>r = 250 V</td></tr><tr><td>b = 4 V</td><td>h = 63 V</td><td>s = 350 V</td></tr><tr><td>c = 6.3 V</td><td>j = 100 V</td><td>u = 400 V</td></tr><tr><td>d = 10 V</td><td>l = 125 V</td><td>v = 500 V</td></tr><tr><td>e = 16 V</td><td>m = 150 V</td><td>w = 630 V</td></tr><tr><td>f = 25 V</td><td>q = 200 V</td><td>x = 1000 V</td></tr></table> |                     |            |  | * a = 2.5 V | g = 40 V | r = 250 V | b = 4 V | h = 63 V | s = 350 V | c = 6.3 V | j = 100 V | u = 400 V | d = 10 V | l = 125 V | v = 500 V | e = 16 V | m = 150 V | w = 630 V | f = 25 V | q = 200 V | x = 1000 V |
| * a = 2.5 V                                                                                                                                                                                                                                                                                                                                                                                           | g = 40 V            | r = 250 V  |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
| b = 4 V                                                                                                                                                                                                                                                                                                                                                                                               | h = 63 V            | s = 350 V  |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
| c = 6.3 V                                                                                                                                                                                                                                                                                                                                                                                             | j = 100 V           | u = 400 V  |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
| d = 10 V                                                                                                                                                                                                                                                                                                                                                                                              | l = 125 V           | v = 500 V  |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
| e = 16 V                                                                                                                                                                                                                                                                                                                                                                                              | m = 150 V           | w = 630 V  |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |
| f = 25 V                                                                                                                                                                                                                                                                                                                                                                                              | q = 200 V           | x = 1000 V |  |             |          |           |         |          |           |           |           |           |          |           |           |          |           |           |          |           |            |

20716 B20