

Service
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Service Manual

20-20000 Hz (± 1 dB)

$D \leq 0.1\%$ 200mV/180k

1V~

A

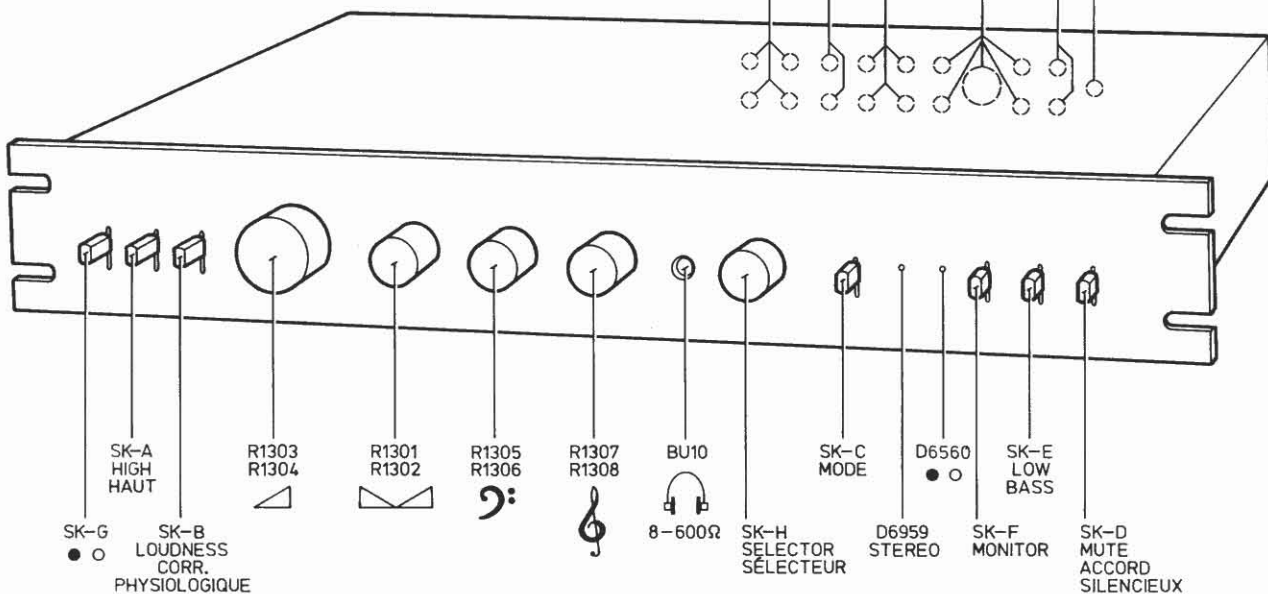
200mV/100k

B

2.3mV/47k

\pm

TUNER



15511B12



GB SPECIFICATIONS

Harmonic distortion (1 V)	: 0.1 %
Intermodulation distortion (250/8000 Hz 4:1) (1 V)	: 1 %
Frequency response	: 20-20.000 Hz
Stereo separation	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
Signal-to-noise ratio	: 70 dB
Dimensions	: 482x78x280 mm

F CARACTERISTIQUES TECHNIQUES

Distorsion harmonique (1 V)	: 0.1 %
Distorsion intermodulatoire (250/8000 Hz 4:1) (1 V)	: 1 %
Courbe amplitude/fréquence	: 20-20.000 Hz
Separation en stereo	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
Rapport signal/bruit	: 70 dB
Dimensions	: 482x78x280 mm

I DATI TECNICI

Distorsione armonica (1 V)	: 0.1 %
Intermodulazione (250/8000 Hz 4:1) (1 V)	: 1 %
Risposta in frequenza	: 20-20.000 Hz
Separazione stereo	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
Rapporto segnale/disturbo	: 70 dB
Dimensioni	: 482x78x280 mm

DK TEKNISKE DATA

Harmonisk forvrængning (1 V)	: 0.1 %
Intermodulation (250/8000 Hz 4:1) (1 V)	: 1 %
Frekvens område	: 20-20.000 Hz
Stereo separation	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
Signal/støjforhold	: 70 dB
Dimensioner	: 482x78x280 mm

SF TEKNISET TIEDOT

Harmoninen särö (1 V)	: 0.1 %
Keskeismodulaatio (250/8000 Hz 4:1) (1 V)	: 1 %
Toistoalue	: 20-20.000 Hz

NL SPECIFICATIES

Harmonische vervorming (1 V)	: 0.1 %
Intermodulatie (250/8000 Hz 4:1) (1 V)	: 1 %
Frequentiebereik	: 20-20.000 Hz
Kanaalscheiding	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
Signaal/ruisverhouding	: 70 dB
Afmetingen	: 482x78x280 mm

D TECHNISCHE DATEN

Klirrgrad (1 V)	: 0.1 %
Intermodulationsgrad (250/8000 Hz 4:1) (1 V)	: 1 %
Uebertragungsbereich	: 20-20.000 Hz
Ueberspechdämpfung	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
S/R-Verhältnis	: 70 dB
Abmessungen	: 482x78x280 mm

N TEKNISKE DATA

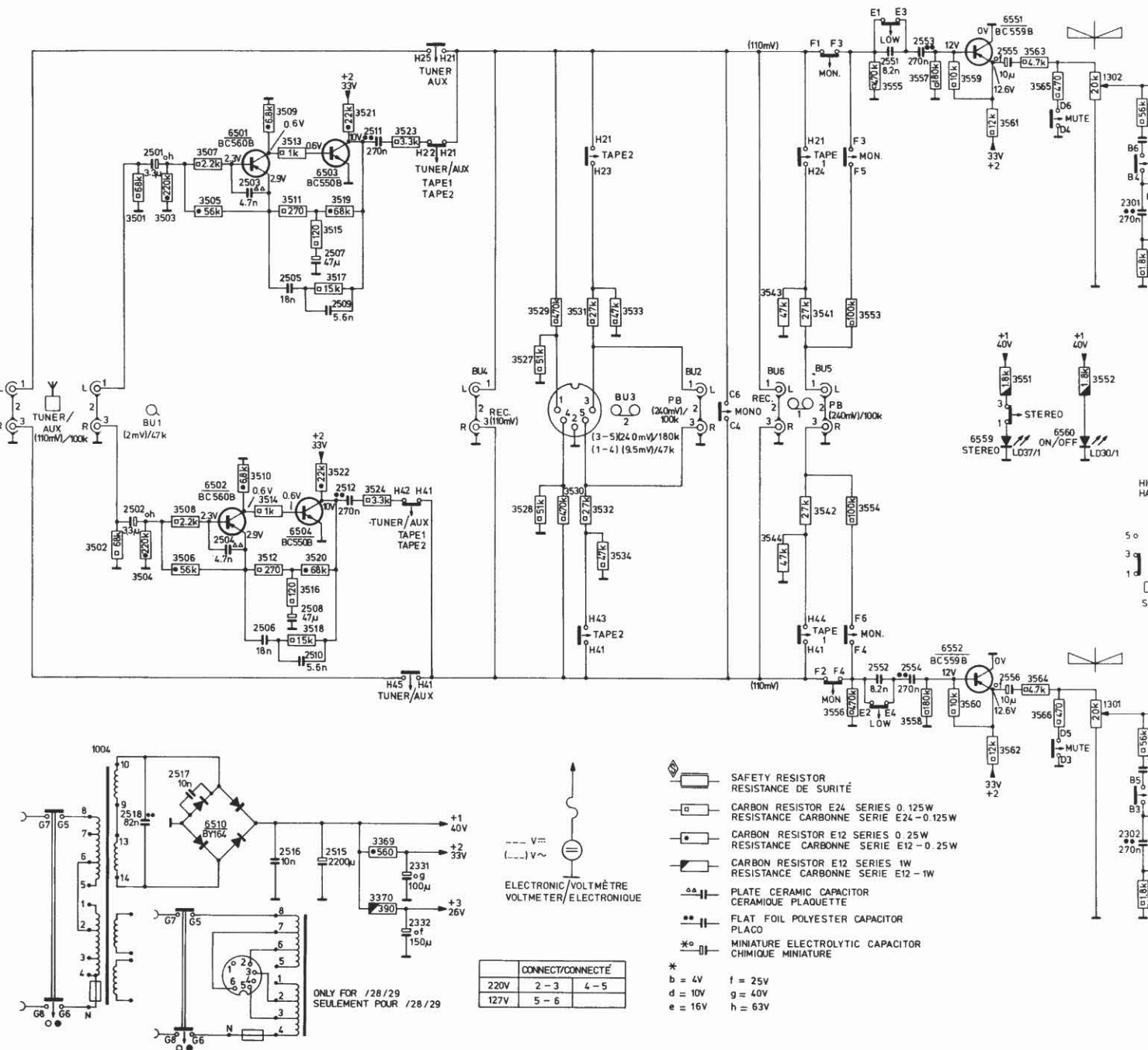
Harmonisk forvrængning (1 V)	: 0.1 %
Intermodulasjon (250/8000 Hz 4:1) (1 V)	: 1 %
Frekvensområde	: 20-20.000 Hz
Stereoseparasjon	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
Signal/støy-forhold	: 70 dB
Dimensjoner	: 482x78x280 mm

S TEKNISKA DATA

Harmonisk distorsion (1 V)	: 0.1 %
Intermodulation (250/8000 Hz 4:1) (1 V)	: 1 %
Frekvensomfång	: 20-20.000 Hz
Kanalseparation	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
Signal/brusförhållande	: 70 dB
Dimensioner	: 482x78x280 mm

Kanavaerotus	
250 Hz	: 30 dB
1 kHz	: 40 dB
10 kHz	: 30 dB
Signaalikohinasuhde	: 70 dB
Mitat	: 482x78x280 mm

M	BU1	TS 6501	TS 6503	BU4	BU3	BU2	BU6	BU5	TS 6552	TS 6551	
M	1004	D6510, TS 6502	TS 6504						D6959		
C		2502 2501	2504 2503	2506 2505 2507...2510 2511					2551 2553	2555	2301 2302
C		2518 2517	2516	2515, 2512	2331, 2332				2552 2554	2556	3502 3503
R		3501 3503 3507	3509 3513 3511 3519 3521	3523		3527 3529 3531	3533		3543, 3541	3553 3555 3557 3559	3561 3563 3565 1302
R		3508 3505	3514 3516 3515 3517								3551 3552
R	3502	3504 3506	3510 3512 3518 3520 3522 3524			3528 3530 3532 3534			3544, 3542	3554 3556 3558 3560	3562 3564 3566 1301
R			3369, 3370								3369, 3370



CONNECT/CONNECTÉ		
220V	2 - 3	4 - 5
127V	5 - 6	

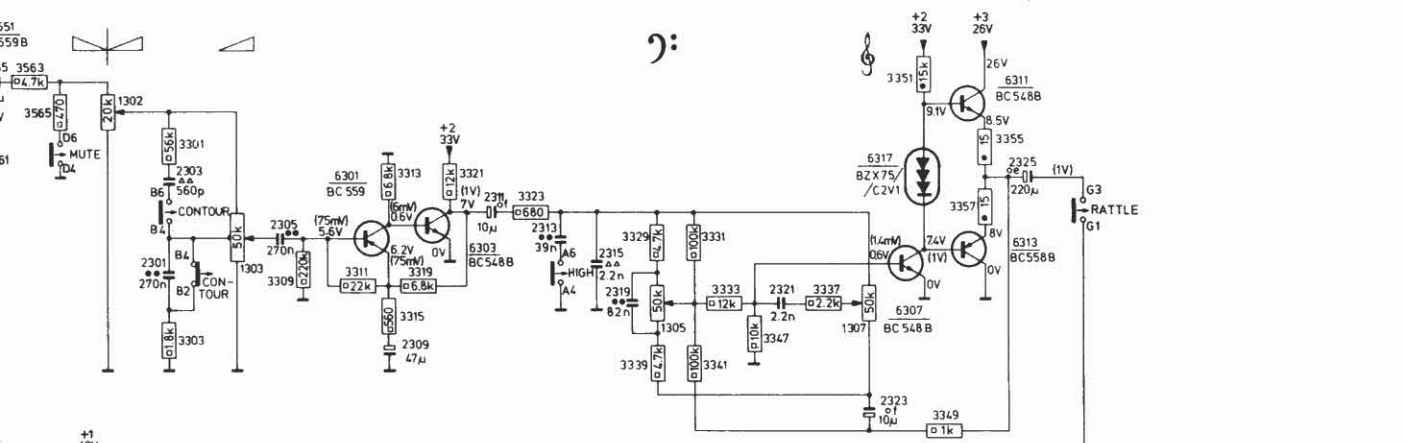
- SAFETY RESISTOR
RESISTANCE DE SÛRITÉ
- CARBON RESISTOR E24 SERIES 0.125W
RESISTANCE CARBONNE SERIE E24 - 0.125W
- CARBON RESISTOR E12 SERIES 0.25W
RESISTANCE CARBONNE SERIE E12 - 0.25W
- CARBON RESISTOR E12 SERIES 1W
RESISTANCE CARBONNE SERIE E12 - 1W
- PLATE CERAMIC CAPACITOR
CERAMIQUE PLAQUETTE
- FLAT FOIL POLYESTER CAPACITOR
PLACO
- MINIATURE ELECTROLYTIC CAPACITOR
CHIMIQUE MINIATURE

* b = 4V f = 25V
d = 10V g = 40V
e = 16V h = 63V

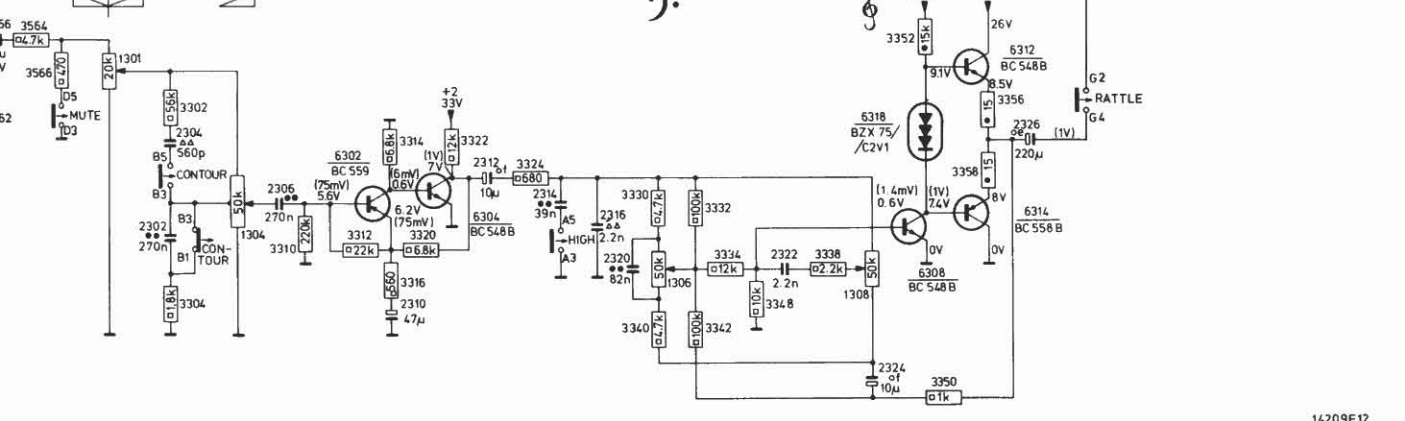
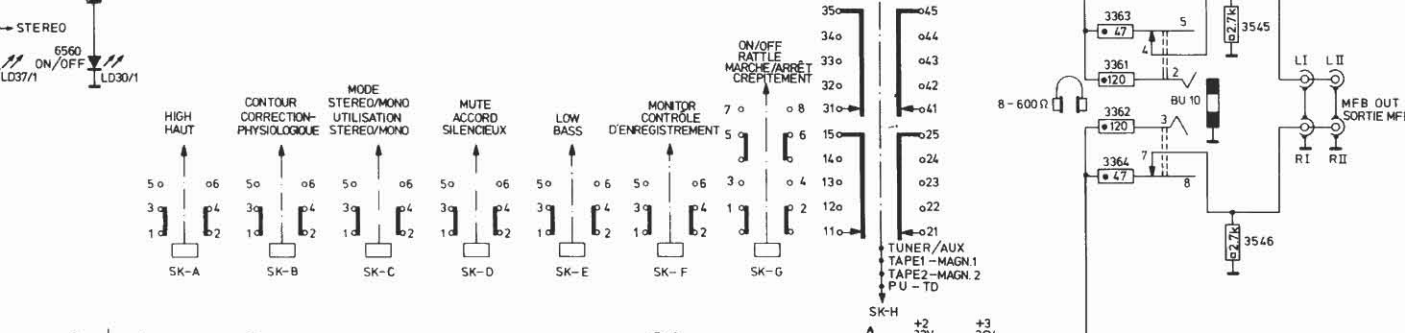
--- V ~
[] V ~
ELECTRONIC / VOLTMÈTRE
VOLTMETER / ELECTRONIQUE

ONLY FOR / 28 / 29
SEULEMENT POUR / 28 / 29

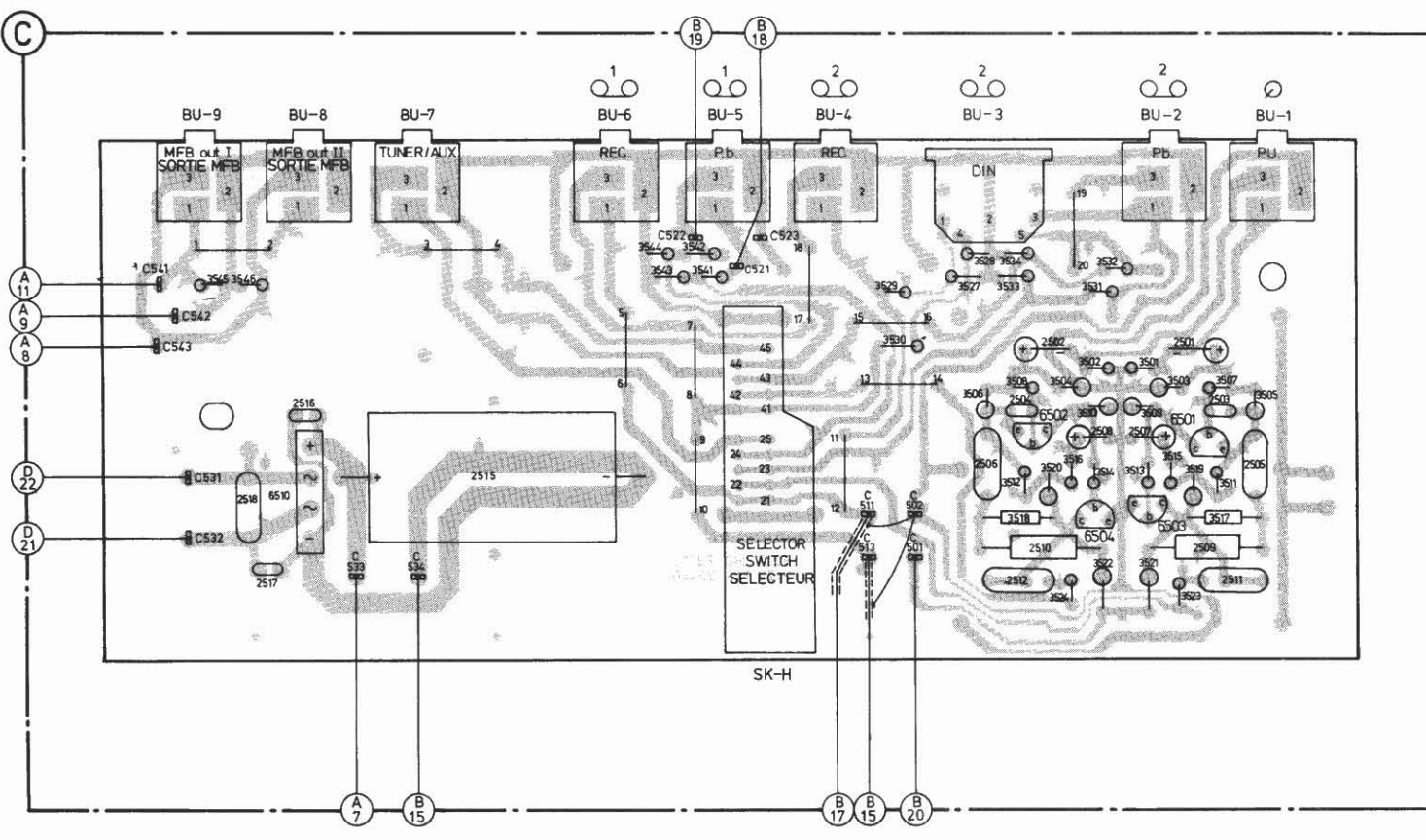
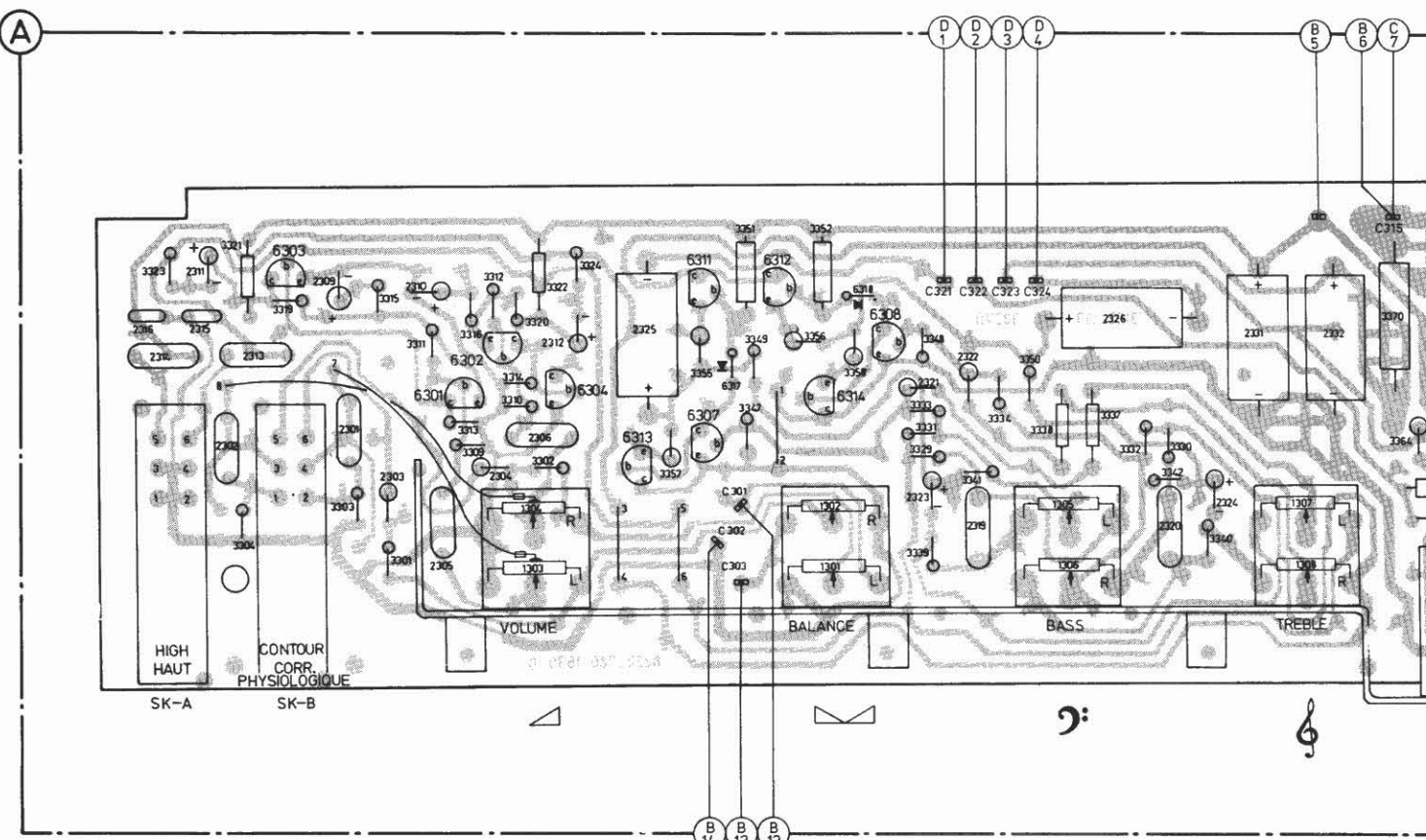
551	TS 6301					TS 6303				D6317 TS 6307, 6311, 6313						M							
59	TS 6302										TS 6304				D6318 TS 6308, 6312, 6314				M				
2301	2303	2305	2309	2311	2313	2315	2319	2321	2323	2325		2326		C									
2302	2304	2306	2310	2312	2314	2316	2320	2322	2324	2324		2326		C									
3563	3565	1302	3301	1303	3309	3311	3313	3319	3321	3323	3329	1305	3331	3333	3347	3337	1307	3351	3355	3363	3345	R	
1	3552	3303	3303	3303	3315	3315	3315	3339	3341	3339	3339	3341	3339	3341	3339	3341	3339	1307	3351	3355	3363	3345	R
3564	3566	1301	3302	1304	3310	3312	3314	3320	3322	3324	3330	1306	3332	3334	3348	3338	1308	3352	3356	3362	3346	R	
			3304				3316				3340		3342					3350	3358	3364	3346	R	



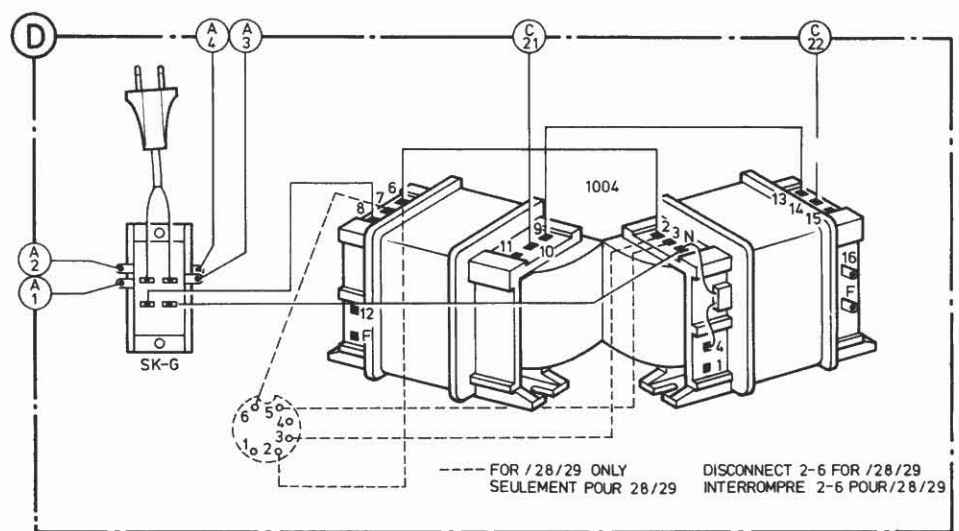
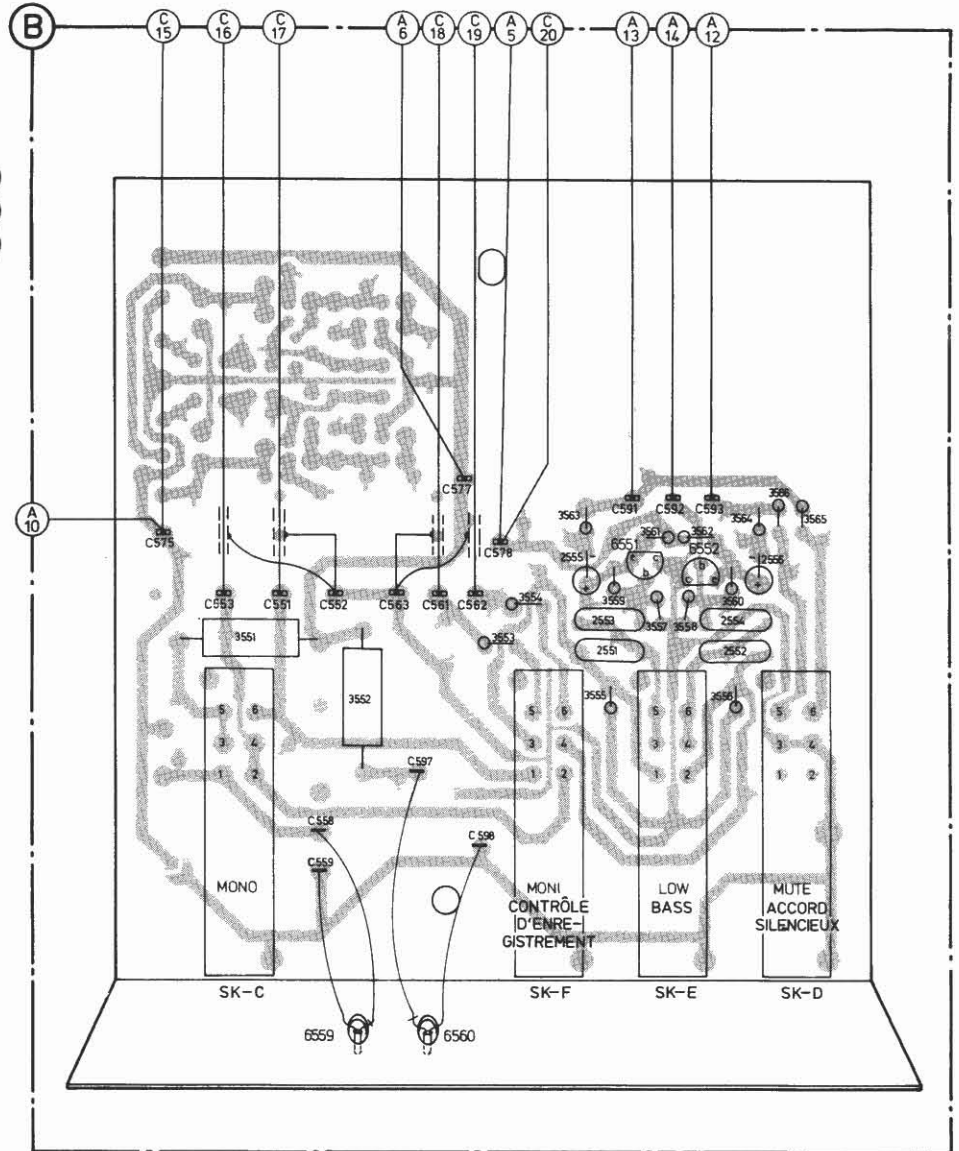
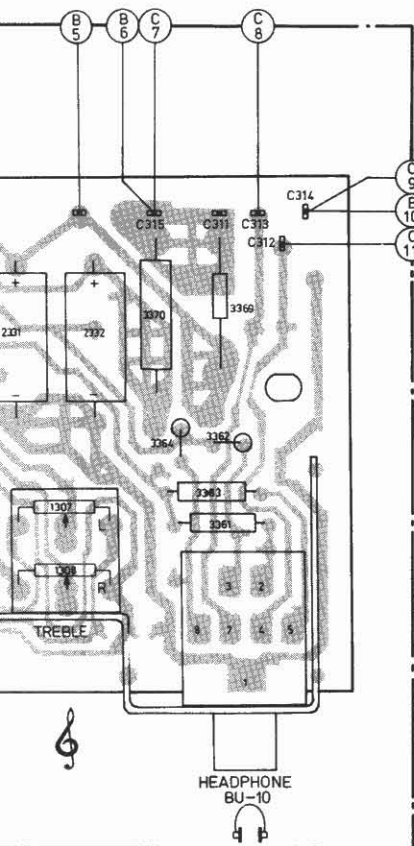
THE CIRCUIT IS DRAWN IN POSITION PU
LE CIRCUIT EST DESSINÉ EN POSITION TD

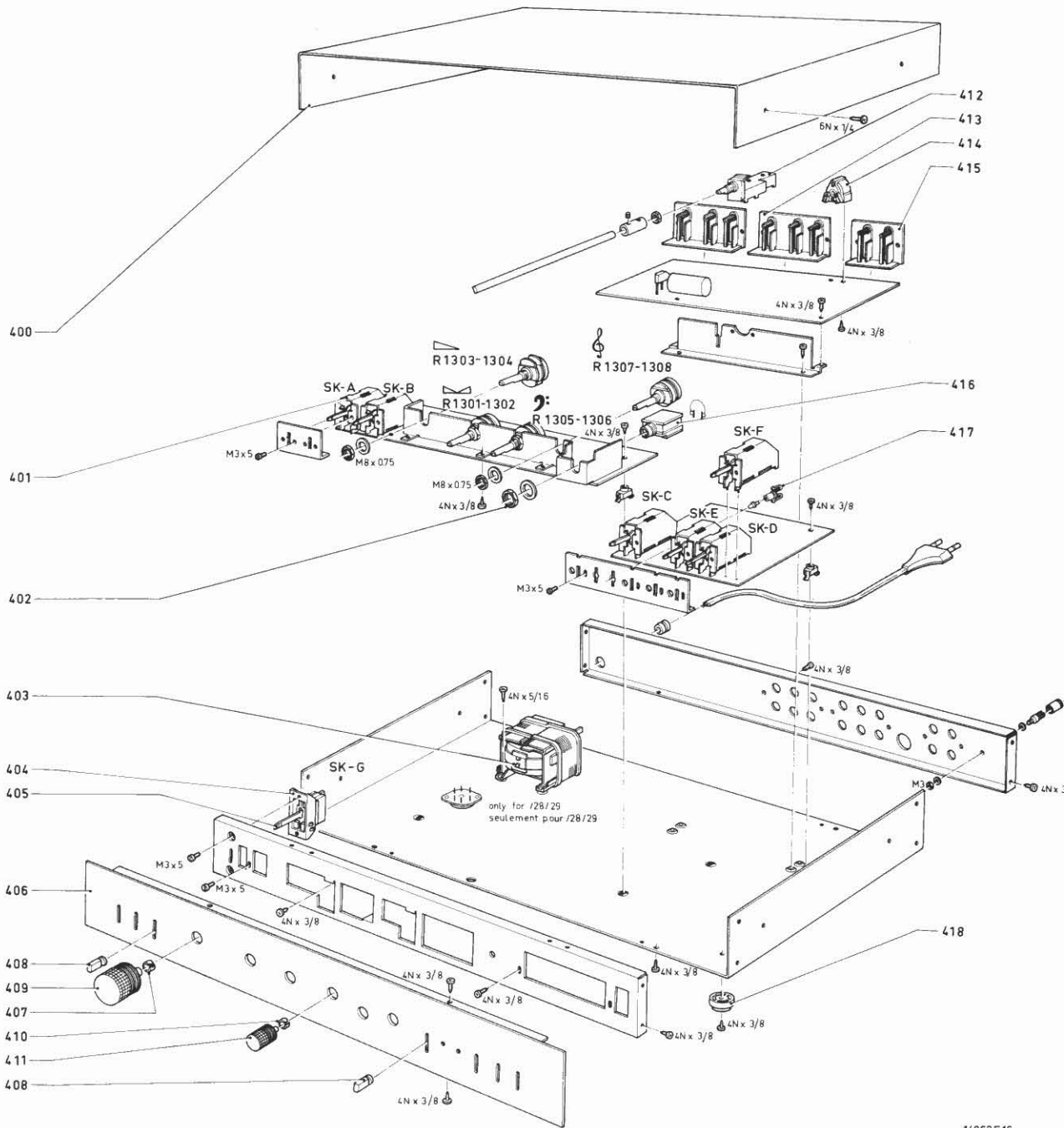


MISC	6510.6303	6301.6302	6304.6313	6311.6307.6317.6312.6314.6318.6308	6502.6504	6503.6501	
C	2316.2314.2311.2315.2302.2313.2309.2301.2303.2310.2304...2306.2317	2325	2323.2321.2322.2319	2326	2320	2324.2331	
	2518.2517.2516	2515	2506.2512.2504.2510.2502.2508.2507.2501.2509.2503.2511.2505				
R	3323	3321.3304.3319.3315.3309...3316.3320.3302.3322.3324.3357.3355.3351.3352.3356.3358.3348.3333.3331	3334.3350.3338.3337.3332.3330	3370.3371.3372.3373.3374.3375.3376.3377.3378.3379.3380.3381.3382.3383.3384.3385.3386.3387.3388.3389.3390.3391.3392.3393.3394.3395.3396.3397.3398.3399.3400.3401.3402.3403.3404.3405.3406.3407.3408.3409.3410.3411.3412.3413.3414.3415.3416.3417.3418.3419.3420.3421.3422.3423.3424.3425.3426.3427.3428.3429.3430.3431.3432.3433.3434.3435.3436.3437.3438.3439.3440.3441.3442.3443.3444.3445.3446.3447.3448.3449.3450.3451.3452.3453.3454.3455.3456.3457.3458.3459.3460.3461.3462.3463.3464.3465.3466.3467.3468.3469.3470.3471.3472.3473.3474.3475.3476.3477.3478.3479.3480.3481.3482.3483.3484.3485.3486.3487.3488.3489.3490.3491.3492.3493.3494.3495.3496.3497.3498.3499.3500.3501.3502.3503.3504.3505.3506.3507.3508.3509.3510.3511.3512.3513.3514.3515.3516.3517.3518.3519.3520.3521.3522.3523.3524.3525.3526.3527.3528.3529.3530.3531.3532.3533.3534.3535.3536.3537.3538.3539.3540.3541.3542.3543.3544.3545.3546.3547.3548.3549.3550.3551.3552.3553.3554.3555.3556.3557.3558.3559.3560.3561.3562.3563.3564.3565.3566.3567.3568.3569.3570.3571.3572.3573.3574.3575.3576.3577.3578.3579.3580.3581.3582.3583.3584.3585.3586.3587.3588.3589.3590.3591.3592.3593.3594.3595.3596.3597.3598.3599.3600			3370.3371.3372.3373.3374.3375.3376.3377.3378.3379.3380.3381.3382.3383.3384.3385.3386.3387.3388.3389.3390.3391.3392.3393.3394.3395.3396.3397.3398.3399.3400.3401.3402.3403.3404.3405.3406.3407.3408.3409.3410.3411.3412.3413.3414.3415.3416.3417.3418.3419.3420.3421.3422.3423.3424.3425.3426.3427.3428.3429.3430.3431.3432.3433.3434.3435.3436.3437.3438.3439.3440.3441.3442.3443.3444.3445.3446.3447.3448.3449.3450.3451.3452.3453.3454.3455.3456.3457.3458.3459.3460.3461.3462.3463.3464.3465.3466.3467.3468.3469.3470.3471.3472.3473.3474.3475.3476.3477.3478.3479.3480.3481.3482.3483.3484.3485.3486.3487.3488.3489.3490.3491.3492.3493.3494.3495.3496.3497.3498.3499.3500.3501.3502.3503.3504.3505.3506.3507.3508.3509.3510.3511.3512.3513.3514.3515.3516.3517.3518.3519.3520.3521.3522.3523.3524.3525.3526.3527.3528.3529.3530.3531.3532.3533.3534.3535.3536.3537.3538.3539.3540.3541.3542.3543.3544.3545.3546.3547.3548.3549.3550.3551.3552.3553.3554.3555.3556.3557.3558.3559.3560.3561.3562.3563.3564.3565.3566.3567.3568.3569.3570.3571.3572.3573.3574.3575.3576.3577.3578.3579.3580.3581.3582.3583.3584.3585.3586.3587.3588.3589.3590.3591.3592.3593.3594.3595.3596.3597.3598.3599.3600







2.2331	2332	6559	6560	1004.6551	6552	MISC
2509.2503.2511.2505				2555.2553	2554.2556	C
	3370.3364.3362.3369			2551	2552	
3340.1307.1308	3363.3361			3554.3563.3559.3561.3562.3560.3564.3566.3565		R
3503.3507.3505				3553	3555.3557.3558.3556	





14962E16

400	4822 425 40138	410	4822 492 60964
401	4822 277 10451	411	4822 413 30763
402	4822 505 10571	412	4822 273 60108
403	4822 146 40235	413	4822 267 40314
404	4822 278 90344	414	4822 267 40209
405	4822 277 10461	415	4822 267 40315
406	4822 426 50281	416	4822 267 30277
407	4822 492 60964	417	4822 256 90201
408	4822 411 50463	418	4822 462 40363
409	4822 413 40792		

					
2309-2310	47 μ F-10 V	4822 124 20461	6301-6302	BC559	4822 130 40963
2321-2322	2.2 nF	4822 121 50415	6303-6304	BC548	4822 130 40937
2505-2506	28 nF	5322 121 54113	6307-6308	BC548	4822 130 40937
2507-2508	47 μ F-10 V	4822 124 20461	6311-6312	BC548	4822 130 40937
2509-2510	5.6 nF	4822 121 50543	6313-6314	BC558B	4822 130 44197
2515	2200 μ F-40 V	4822 124 70252	6501-6502	BC560B	4822 130 41124
2516-2517	10 nF	4822 122 30043	6503-6504	BC550B	5322 130 44454
2551-2552	8.2 nF	4822 121 40147	6551-6552	BC559B	4822 130 44358
					
1301-1302	20K	4822 102 10144	6317-6318	BZX75/C2V1	5322 130 34049
1303-1304	50K	4822 102 10142	6510	BY164	4822 130 30414
1305-1306	50K	4822 102 10143	6559	LD37/1	4822 130 30923
1307-1308	50K	4822 102 10143	6560	LD30/1	4822 130 30924

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

NL

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

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

D

Die Sicherheitsvorschriften erfordern, dass das Gerät sich nach der Reparatur in seinem originalen Zustand befindet und dass die benutzten Einzelteile den aufgeführten Teilen identisch sind.

SF

Korjatessa laitetta on turvallisuusyistä ehdottomasti eneteltävä oikein ja käytettävä tehtaan määräämiä alkuperäisvaraosia.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

S

Säkerhetsbestämmelserna kräver att varje reparation skall utföras korrekt med hänsyn till ursprunglig placering av komponenter, ledningar etc. och med användning af föreskrivna reservdelar.

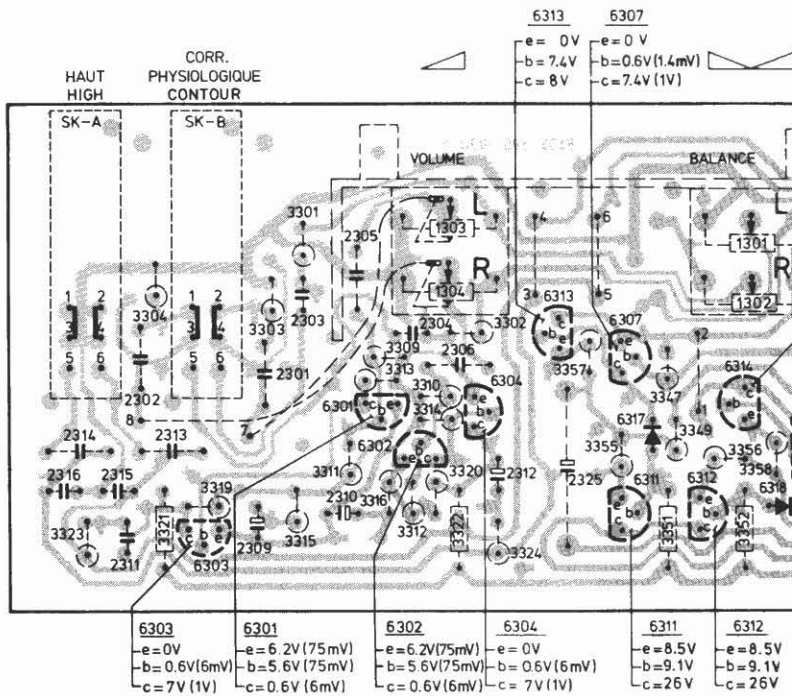
DK

Myndighedernes sikkerheds- og radiostøjbestemmelser kræver, at enhver reparation skal udføres korrekt m.h.t. overholdelse af originalplacering og montering af komponenter, ledningsbündter, etc., og ved anvendelse af de foreskrevne reservedele.

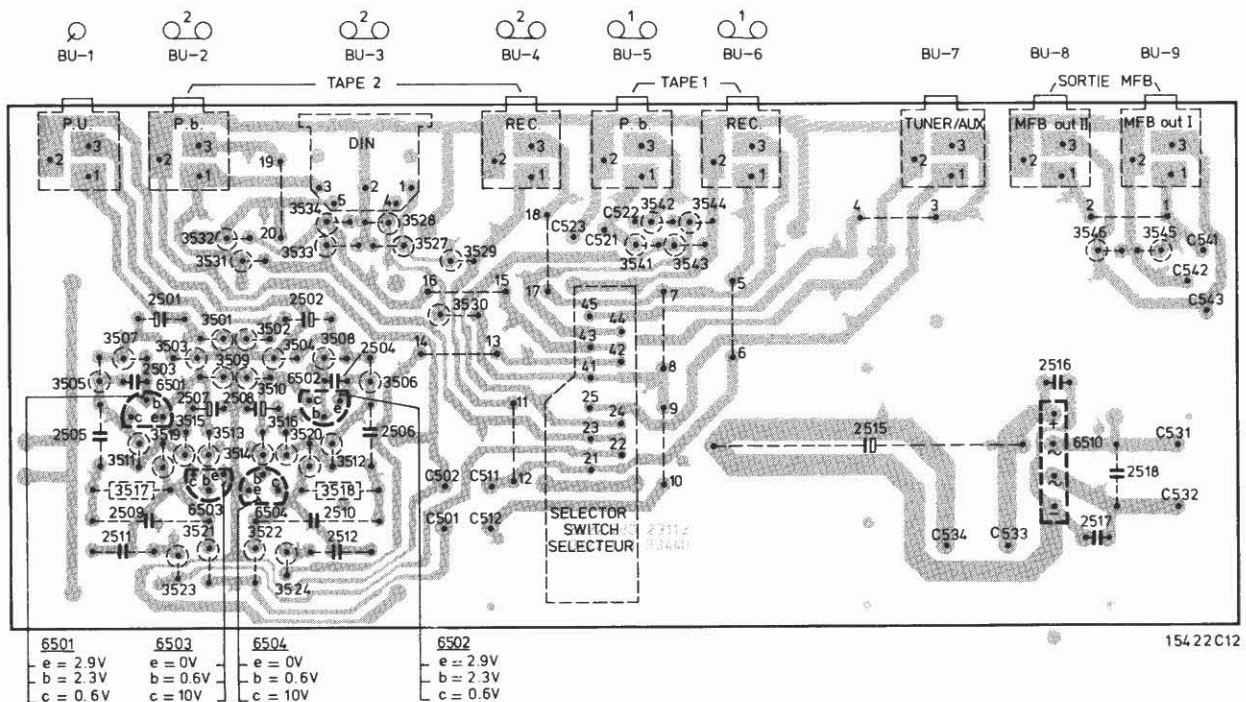
N

Sikkerhetsbestemmelser kreves at apparatet blir gjenopprettet til original utførelse og at deler som er identiske med de som er spesifisert, blir benyttet.

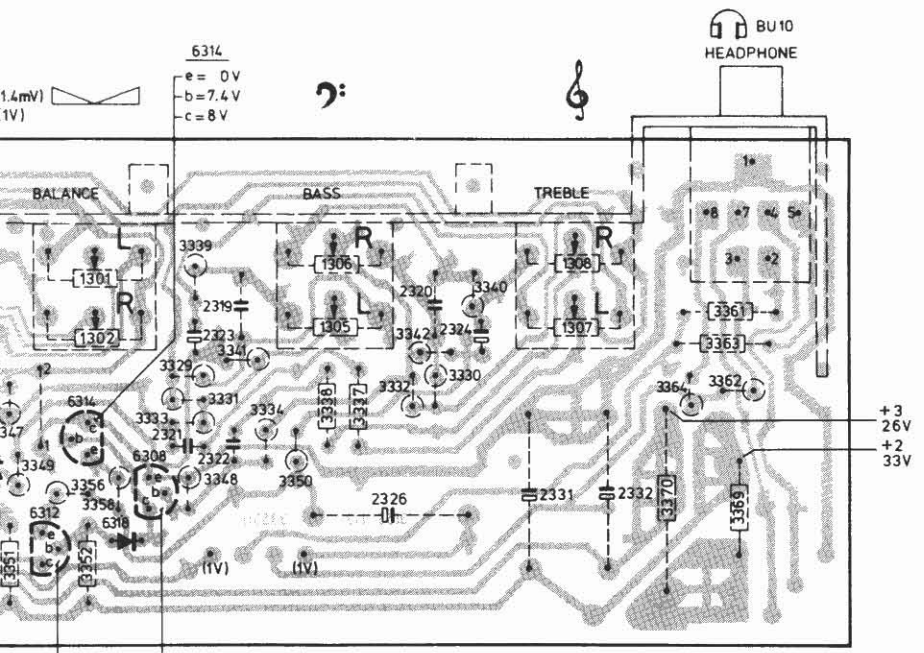
MISC.	SK-A	SK-B.6303	6301.6302	6304	6313.6307.6317.6311	6314	6
C	2313...2316.2311	2302	2309.2301.2303.2310.2305.2304.2306	2312	2325		
R	1331...3334	3323.3304	3321.3319.3303	3301.3309...3316.3322.1303.1304.3320.3302.3324		1301.1302.33	
	3335...3370				3357.3355.3347.3351.3349.3356.3352.335		



MISC.	6501	6503	6504	6502		6510	MISC.
C	2505.2511.2503.2509.2501.2507.2508.2502.2510.2504.2512.2506				2515	2516.2517.2518	C
R	3505.3511.3507.3503.3509.3501.3513...3516.3502.3510.3504.3508.3512.3506						R
R	3517.3519.3521...3524.3531...3534.3520.3518.3527...3530	3541...3544				3546.3545	R

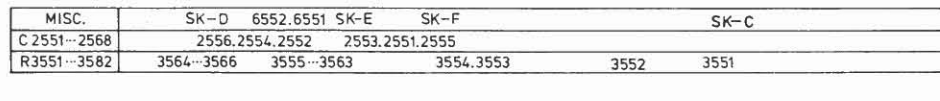


6311	6314	6308	BU10				MISC.
2319...2323		2326.2320.2324		2331	2332		
1301.1302.3333.3325.3331.3334			1306.1305.3332.3330		1301...3334		
3349.3356.3352.3358			3339.3348.3341.3350.3338		3370.3361...3364.3369		
			3342		3340		
					3335...3370		

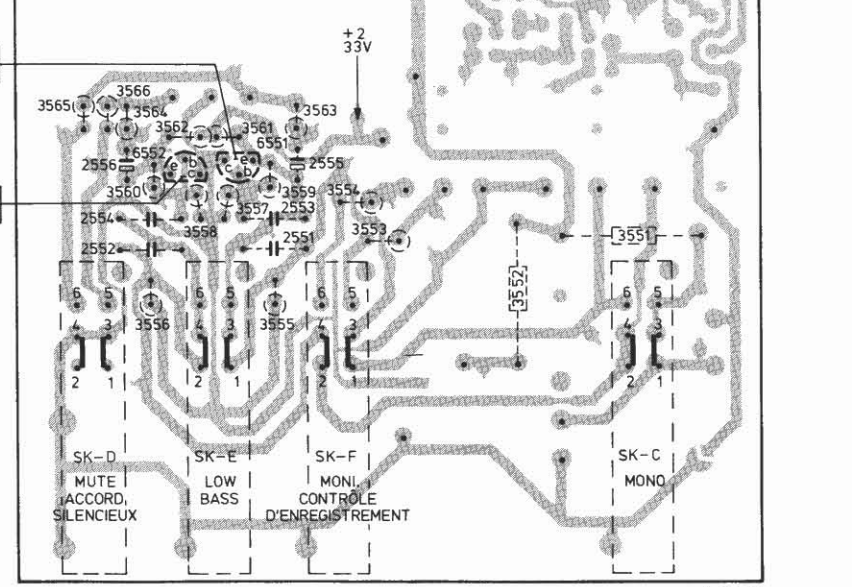


6311	6312	6308	6301...6304	6317
e=8.5V	e=8.5V	e=0V	6307.6308	6318
b=9.1V	b=9.1V	b=0.6V (1.4mV)	6311...6314	
c=26V	c=26V	c=7.4V (1V)		

C.	MISC.	SK-D	6552.6551	SK-E	SK-F	SK-C
C	C 2551...2568		2556.2554.2552	2553.2551.2555		
R	R3551...3582		3564...3566	3555...3563	3554.3553	3552 3551



6551	6552
e=12.6V	e=12.6V
b=12V	b=12V
c=0V	c=0V



6551	6552	---	V ~
e	b	(---)	V ~