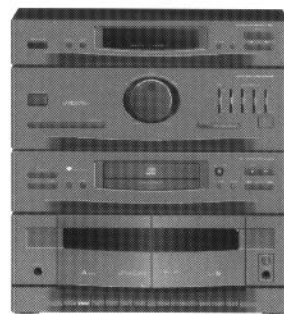


Service Service Service



Service Manual

COMPACT
disc
DIGITAL AUDIO

TABLE OF CONTENTS

Specification	2 - 3
Measurement setup	4
Safety	5
Connections & Controls	6 - 7
Service hints	8
Dismantling Hints	9 - 11
Service Testprogram	12 - 16
Wiring Diagram of Set	17 - 18
Block Diagram of Set	19 - 21
Micro Mix Board	
Circuit Diagram	22
Component Layout	22
Front Board	
Component Layout copperside view	23 - 24
Circuit Diagram AF-Part	25 - 26
Component Layout componentside view	27 - 28
Circuit Diagram Control-Part	29 - 30
Recorder Board	
Adjustment Table	31
Component Layout	32
Circuit Diagram	33 - 34
Power Board (all version except /22)	
Component Layout	35 - 36
Circuit Diagram	37 - 38
Power Board (for /22 only)	
Component Layout	39 - 40
Circuit Diagram	41 - 42
Trafo Board	
Circuit Diagram	43
Component Layout	43

ECO 4 Tuner

Circuit Diagram	44 - 46
Component Layout	47 - 48
Adjustment Table	49

Tuner 92

Circuit Diagram	50 - 52
Component Layout	53 - 54
Adjustment Table	55

CD

Dismantling of CD Unit	56 - 59
Block Diagram	59 - 60
Component Layout	61 - 62
Circuit Diagram	63 - 65
Faultfinding Tree	66 - 67
Abbreviations	68
Exploded View CD	69 - 70

Exploded Views of Set	69 - 72
Partslist	73 ff

Annex

Service Manual Tape Transport RDN-11

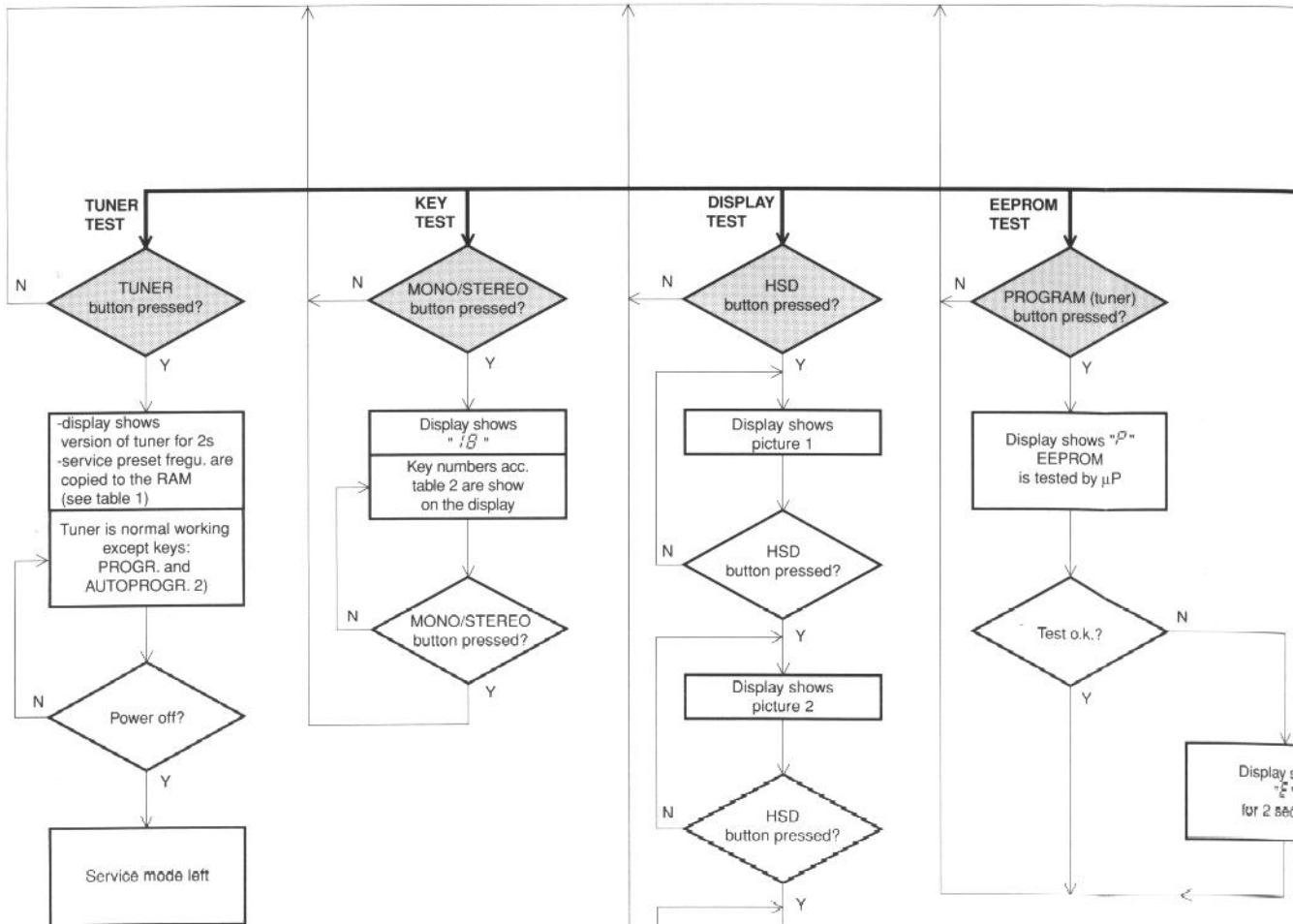
Service Manual Record Player DL-40

**CLASS 1
LASER PRODUCT**

SERVICE TEST PROGRAM

The service test program can be left:

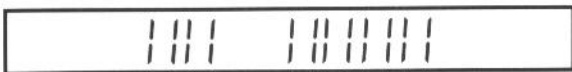
- at each step: by switching power off (disconnect mains)
- from service main menu: by pressing the Standby button twice the set is switched to normal working mode except:
 - * in TUNER mode still the service preset frequencies are available.
 - * in CD mode the error codes will be displayed.



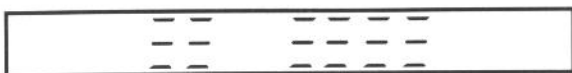
2) Preset frequencies of table 1 can be used as in normal tuner mode. If field strength is high enough "PROGRAM" flag will light. Preset frequencies stored by the customer are still stored in the EEPROM and can be recalled by a reset of the μP (switching power off by disconnecting mains cord)



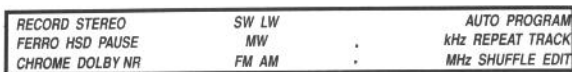
Picture 1



Picture 2



Picture 3



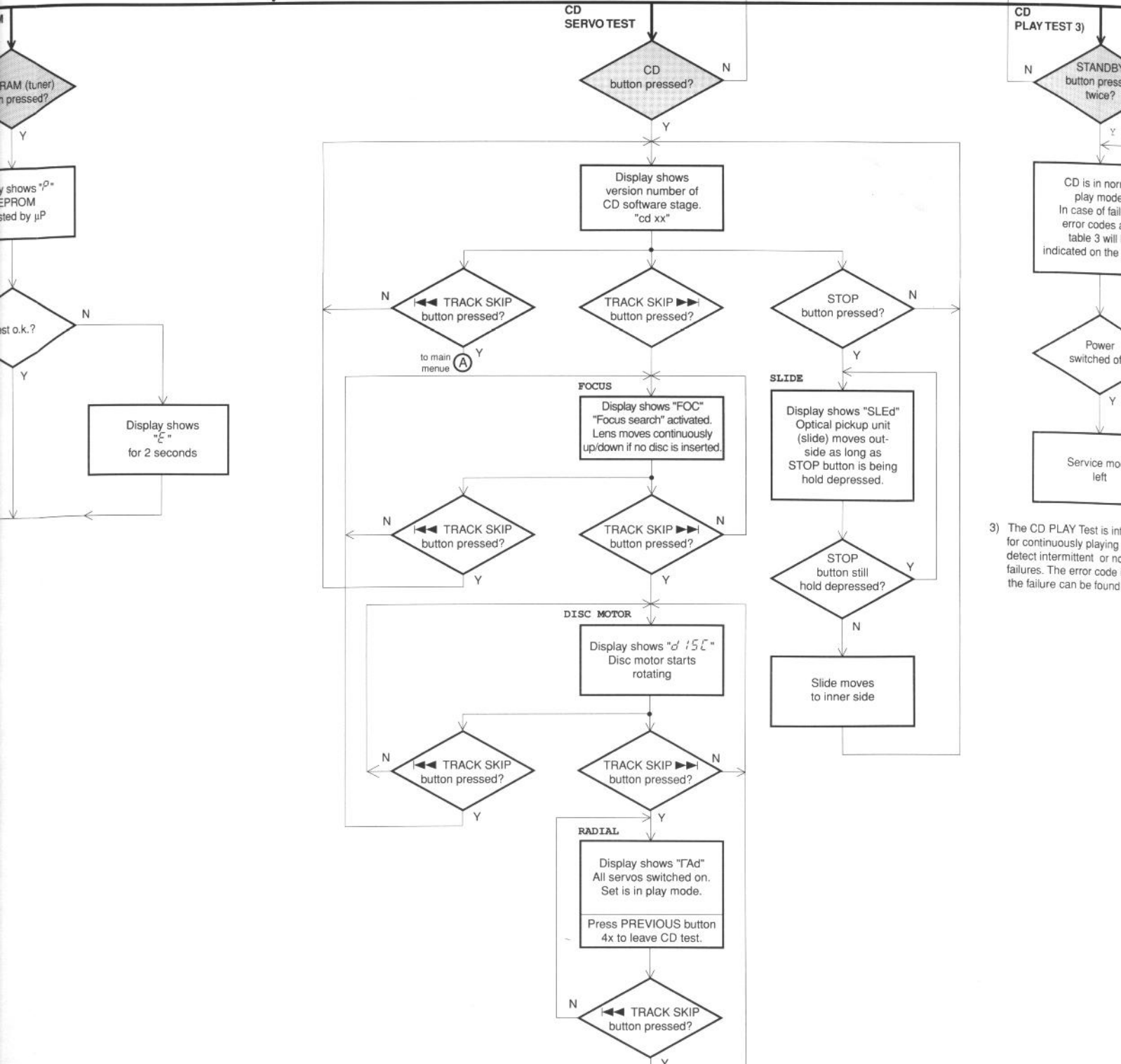
Picture 4

To start service test program hold
PROGR. & PRESET UP
 buttons depressed while
 plugging in the mains cord

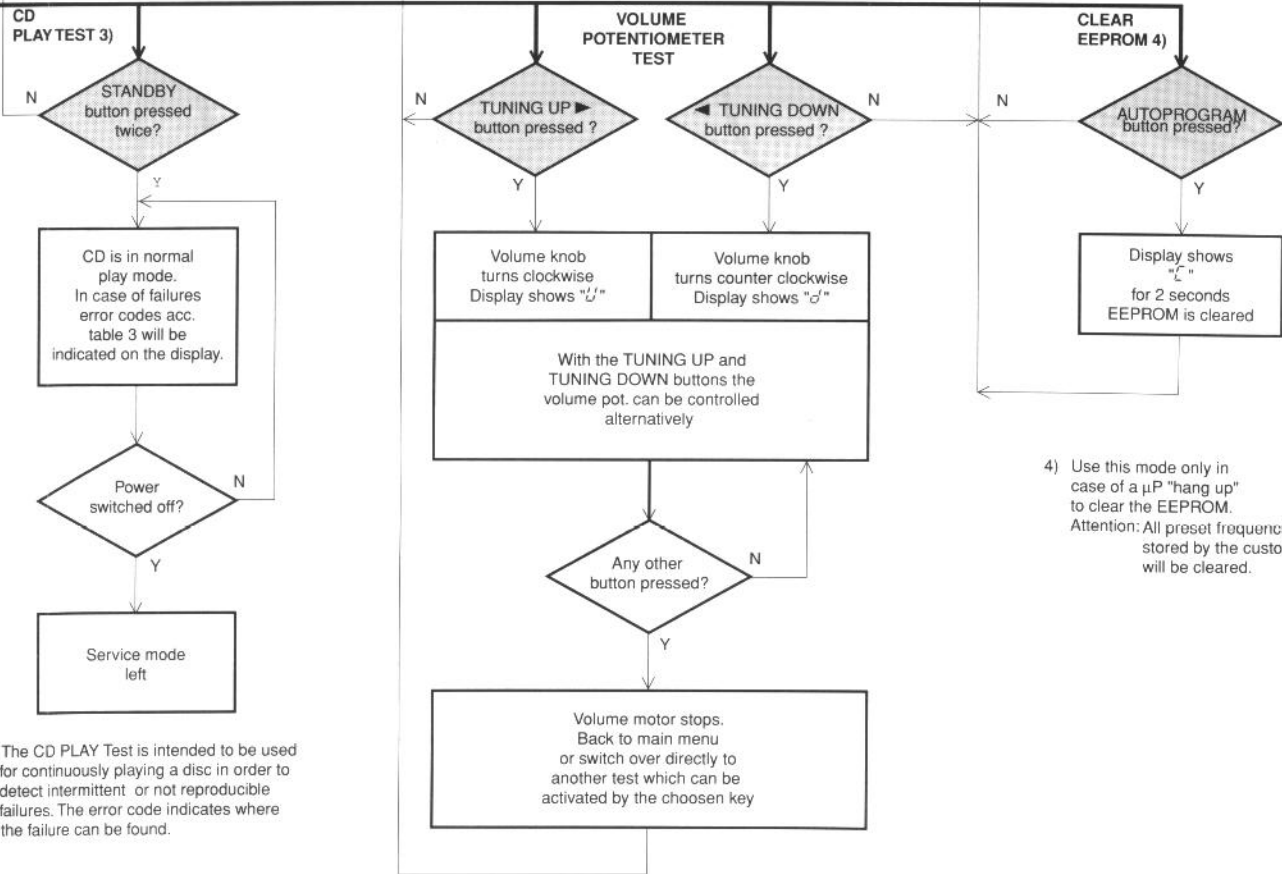


Display shows set name
 and number of ROM
 version "54 xx S" 1)
 (Main menu)

1) 54 stands for AS 440 or AS 540
 64 stands for AS 640
 xx version number of software
 S stands for Service test program
 divided quartz frequency of front μ P (61 Hz) can
 be measured on pin 34 of the display



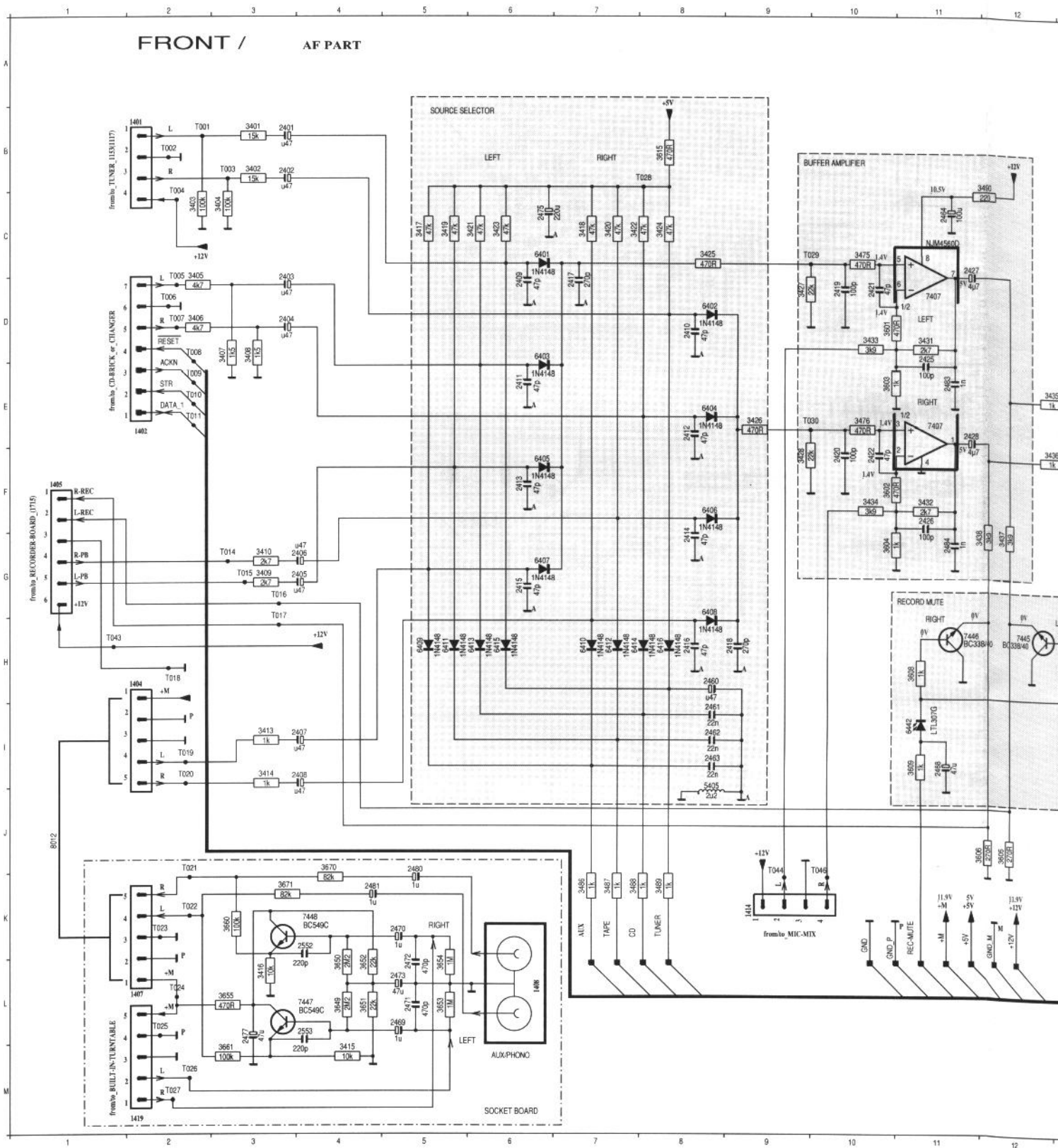
3) The CD PLAY Test is intended for continuously playing and detecting intermittent or no failures. The error code in the table 3 will indicate the failure can be found



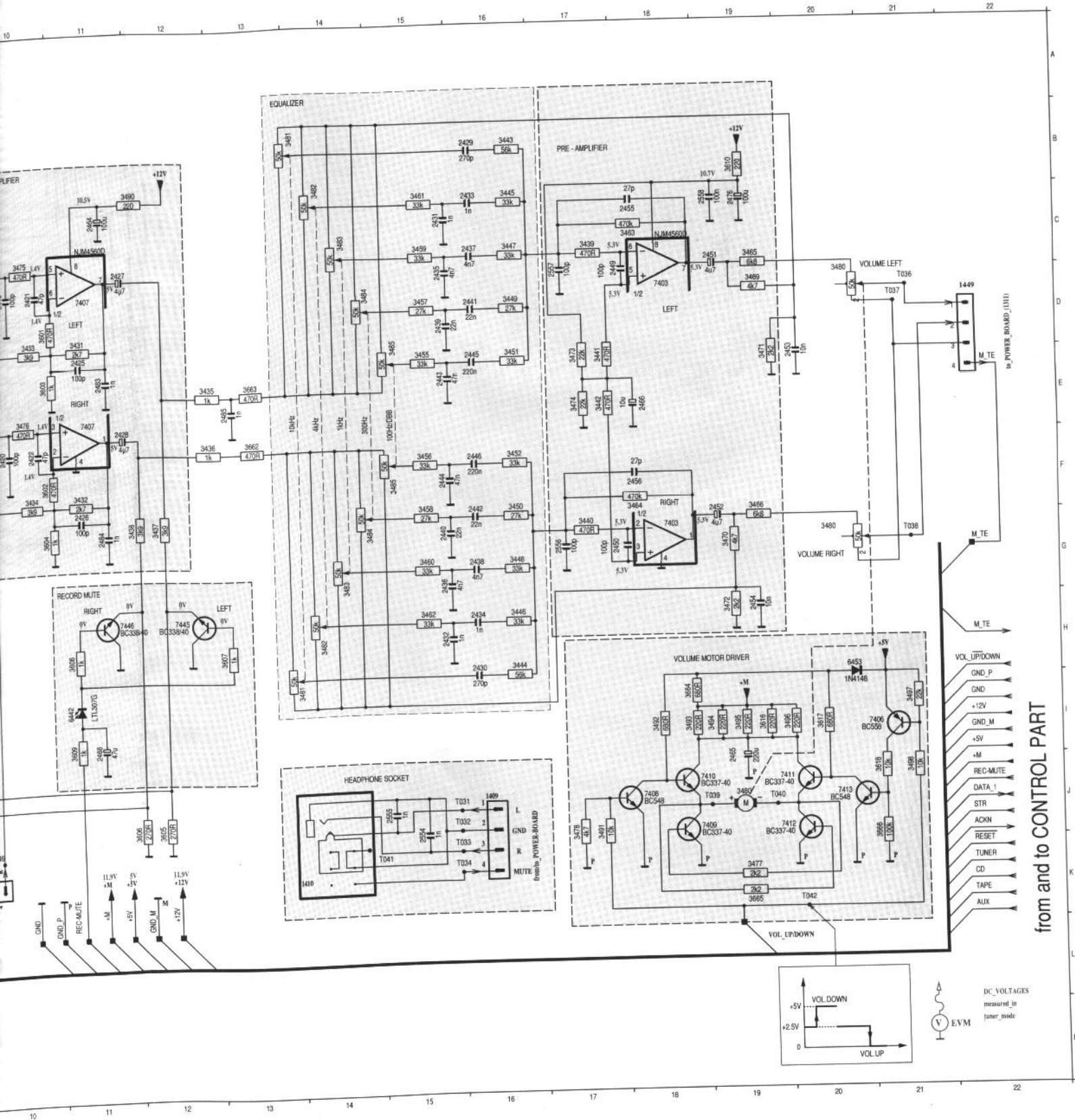
3) The CD PLAY Test is intended to be used for continuously playing a disc in order to detect intermittent or not reproducible failures. The error code indicates where the failure can be found.

4) Use this mode only in case of a μP "hang up" to clear the EEPROM. Attention: All preset frequencies stored by the customer will be cleared.

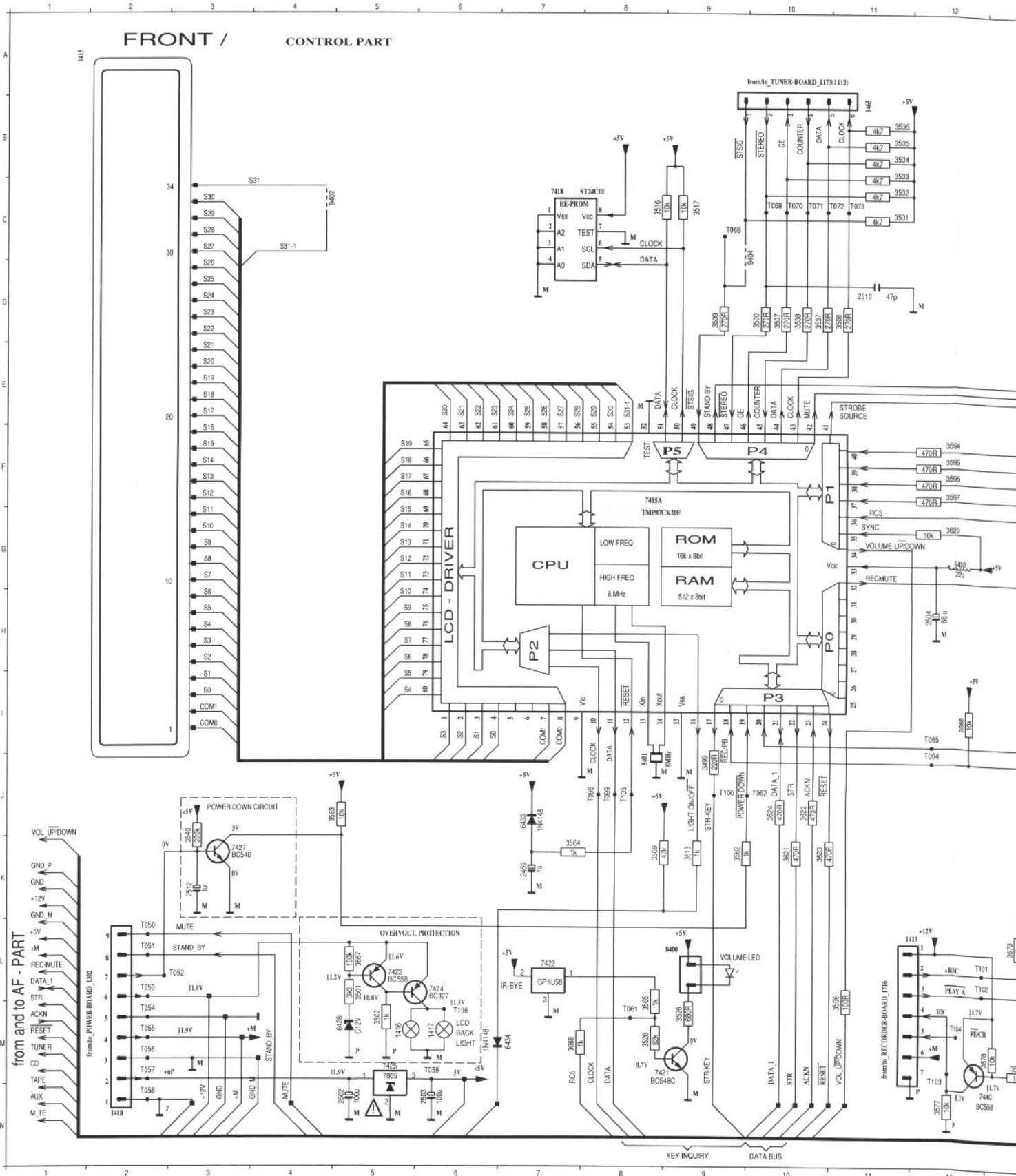
1401	B2	2406	G4	2422	F10	2440	G15	2461	I8	2481	K4	3406	D2	3424	C8	3442	E17	3460	G15	3478
1402	E2	2407	I4	2425	D11	2441	D16	2462	I8	2483	E11	3407	D3	3425	C8	3443	B16	3461	C15	3480
1404	H2	2408	I4	2426	F11	2442	F16	2463	I8	2484	G11	3408	D3	3426	E9	3444	H16	3462	H15	3480
1405	F1	2409	D6	2427	C11	2443	E15	2464	C11	2485	E13	3409	G3	3427	D9	3445	C16	3463	C18	3480
1407	L2	2410	D8	2428	E11	2444	F15	2465	I19	2552	K4	3410	G3	3428	F9	3446	H16	3464	F18	3481
1408	L6	2411	E6	2429	B16	2445	E16	2466	E18	2553	L4	3413	I3	3431	D11	3447	C16	3465	C19	3481
1409	J16	2412	E8	2430	H16	2446	F16	2468	I11	2554	J15	3414	I3	3432	F11	3448	G16	3466	F19	3482
1410	K14	2413	F6	2431	C15	2449	C18	2469	L5	2555	J15	3415	M4	3433	D10	3449	D16	3467	D19	3482
1414	K9	2414	G8	2432	H15	2450	G17	2470	K5	2556	G17	3416	L3	3434	F10	3450	F16	3470	G19	3483
1419	M2	2415	G6	2433	C16	2451	C19	2471	L5	2557	C17	3417	C5	3435	E12	3451	E16	3471	E19	3483
1449	D22	2416	H8	2434	H16	2452	F19	2472	L5	2558	C19	3418	C7	3436	F12	3452	F16	3472	H19	3484
2401	B3	2417	D7	2435	C15	2453	E20	2473	L5	3401	B3	3419	C5	3437	G12	3453	E15	3473	E17	3484
2402	B3	2418	H9	2436	G15	2454	H19	2475	C6	3402	B3	3420	C7	3438	G12	3456	F15	3474	E17	3485
2403	D3	2419	D10	2437	C16	2455	C18	2476	C19	3403	C2	3421	C6	3439	C17	3457	D15	3475	C10	3485
2404	D3	2420	F10	2438	G16	2456	F18	2477	L3	3404	C3	3422	C7	3440	G17	3458	F15	3476	E10	3486
2405	G4	2421	D10	2439	D15	2460	H8	2480	J5	3405	D2	3423	C6	3441	E17	3459	C15	3477	K19	3487



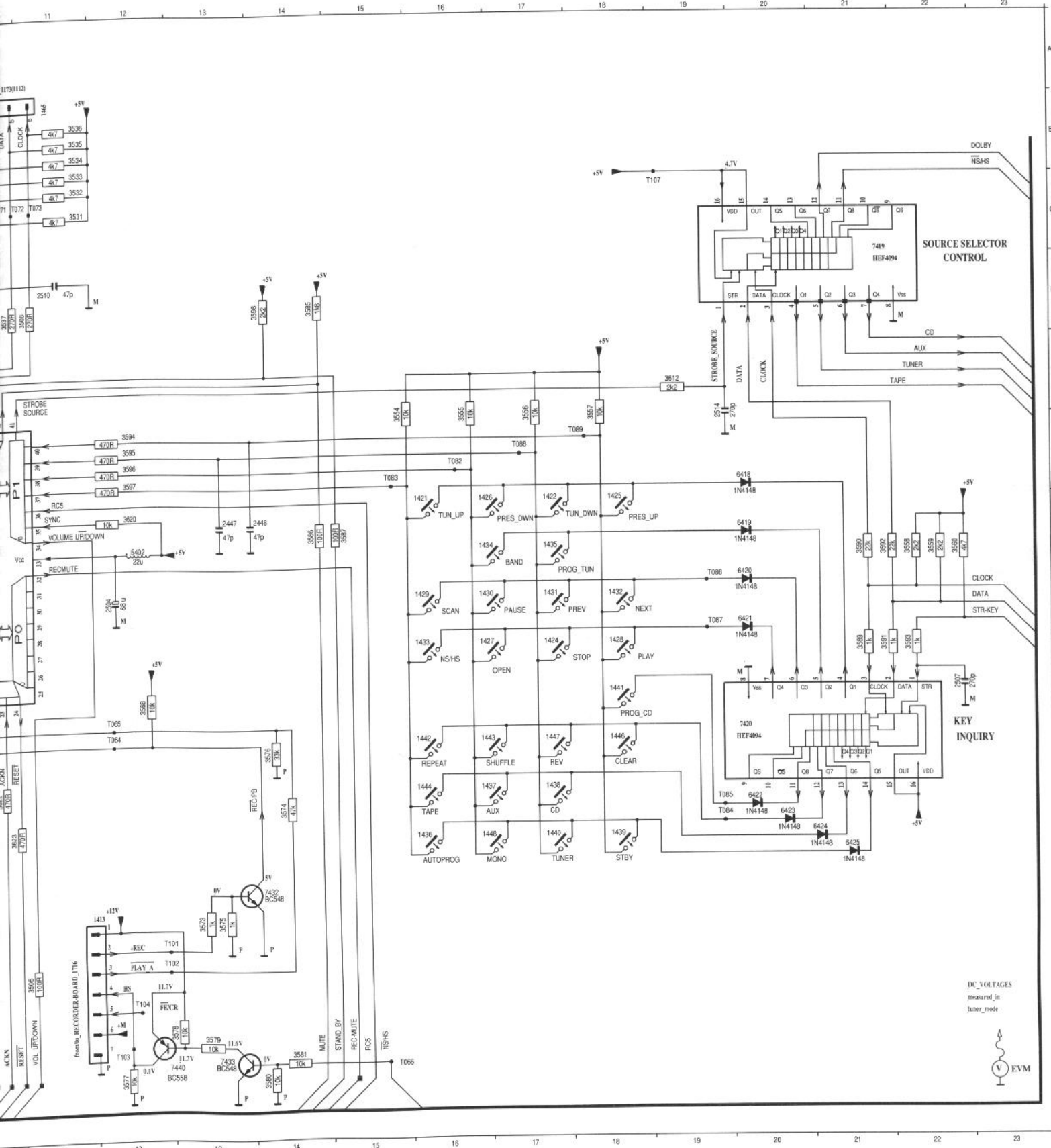
02	E17	3460	G15	3478	J17	3488	K7	3606	J12	3660	K3	6407	G6	7407	E11	T006	D2	T024	L2	T041	K15
03	B16	3461	C15	3480	C20	3489	K8	3607	H13	3661	M3	6408	G8	7408	J18	T007	D2	T025	L2	T042	K20
04	H16	3462	H15	3480	J19	3490	B12	3608	H11	3662	F13	6409	H5	7409	J18	T008	D2	T026	M2	T043	H1
05	C16	3463	C18	3480	G20	3491	J17	3609	I11	3663	E13	6410	H7	7410	J18	T009	E2	T027	M2	T044	J9
06	H16	3464	F18	3481	B14	3492	I18	3610	B19	3664	I18	6411	H5	7411	J20	T010	E2	T028	B8	T046	J10
07	C16	3465	C19	3481	I14	3493	I18	3615	B8	3665	K19	6412	H7	7412	J20	T011	E2	T029	C10		
08	G16	3466	F19	3482	B14	3494	I19	3616	I19	3670	J4	6414	H7	7413	J20	T014	G3	T030	E10		
09	D16	3469	D19	3482	H14	3495	I19	3617	I20	3671	K3	6415	H6	7445	H12	T015	G3	T032	J16		
10	F16	3470	G19	3483	G14	3496	I20	3618	J21	3676	J4	6416	H8	7446	H11	T016	G3	T033	J16		
11	E16	3471	E19	3483	C14	3497	I21	3649	L4	5405	J8	6442	I11	7447	L4	T017	G3	T034	K16		
12	F16	3472	H19	3484	G14	3498	J21	3650	L4	6402	D8	6453	H20	7448	K4	T018	H2	T036	D21		
13	E15	3473	E17	3484	D14	3601	D10	3651	L4	6403	D6	7403	G18	T001	B2	T019	I2	T037	D21		
14	F15	3474	E17	3485	D15	3602	F10	3652	L5	6404	E8	7403	D18	T002	B2	T020	I2	T038	G21		
15	D15	3475	C10	3485	F15	3603	E10	3653	L5	6404	E8	7403	D18	T003	B3	T021	J2	T039	J19		
16	F15	3476	E10	3486	K7	3604	G10	3654	L5	6405	F6	7406	I21	T004	B2	T022	K2	T039	J19		
17	C15	3477	K19	3487	K7	3605	J12	3655	L3	6406	F8	7407	D11	T005	C2	T023	K2	T040	J19		



1413 L12	1428 H18	1439 K18	2502 N5	3506 L11	3534 B11	3558 G22	3575 L13	3590 G21
1415 A1	1429 H16	1440 K17	2503 N6	3507 D10	3535 B11	3559 G22	3576 J14	3591 H21
1416 M5	1430 H16	1441 I18	2504 H12	3508 D11	3536 B11	3560 G22	3577 N12	3592 G21
1417 M6	1431 H17	1442 J16	2507 I22	3509 K8	3537 D10	3562 K9	3578 M13	3593 H22
1418 N2	1432 H18	1443 J16	2510 D11	3516 C8	3538 D10	3563 J5	3579 N13	3594 F12
1421 G16	1433 H16	1444 J16	2512 K3	3517 C9	3539 D9	3565 M8	3580 N14	3595 F12
1422 G17	1434 G16	1446 J18	2514 E19	3526 M9	3540 J3	3566 I12	3581 M14	3596 F12
1424 H17	1435 G17	1447 J17	3499 J9	3528 M8	3554 E15	3568 I12	3585 D14	3597 F12
1425 G18	1436 K16	1448 K16	3500 D10	3531 C11	3555 E16	3572 D11	3586 G14	3598 D14
1426 G16	1437 J16	1465 A11	3501 L5	3532 C11	3556 E17	3573 L13	3587 G15	3598 E19
1427 H16	1438 J17	2459 K7	3502 M5	3533 B11	3557 E18	3574 J14	3589 H21	3613 K9



3575 L13	3590 G21	3620 G12	6420 H20	7419 C21	8400 L9	T058 N2	T072 C11	T098 J8
3576 J14	3591 H21	3621 K10	6421 H20	7420 I20	9402 C4	T059 M6	T073 C11	T099 J8
3577 N12	3592 G21	3622 J10	6422 J20	7421 M8	9404 C10	T061 M8	T078 E12	T100 J9
3578 M13	3593 H22	3623 K10	6423 K20	7422 L7	T050 L2	T062 J10	T082 F16	T101 L2
3579 N14	3594 F12	3624 J10	6424 K21	7423 L5	T051 L2	T064 I12	T083 F15	T102 L12
3580 M14	3595 F12	3627 L5	6425 K21	7424 L6	T052 L3	T065 I12	T084 J19	T103 M12
3581 D14	3596 F12	3668 M7	6428 M5	7425 M5	T053 L2	T066 N15	T085 J19	T104 M12
3585 G14	3597 F12	5401 J8	6433 J7	7427 K3	T054 M2	T068 C9	T086 H19	T105 J8
3586 G14	3598 D14	5402 G12	6434 M7	7427 K3	T055 M2	T069 C10	T087 H19	T106 M6
3587 G15	3612 E19	6418 F20	7415A F8	7433 N13	T056 M2	T070 C10	T088 F17	T107 C19
3589 H21	3613 K9	6419 G20	7418 C7	7440 N13	T057 M2	T071 C10	T089 F18	

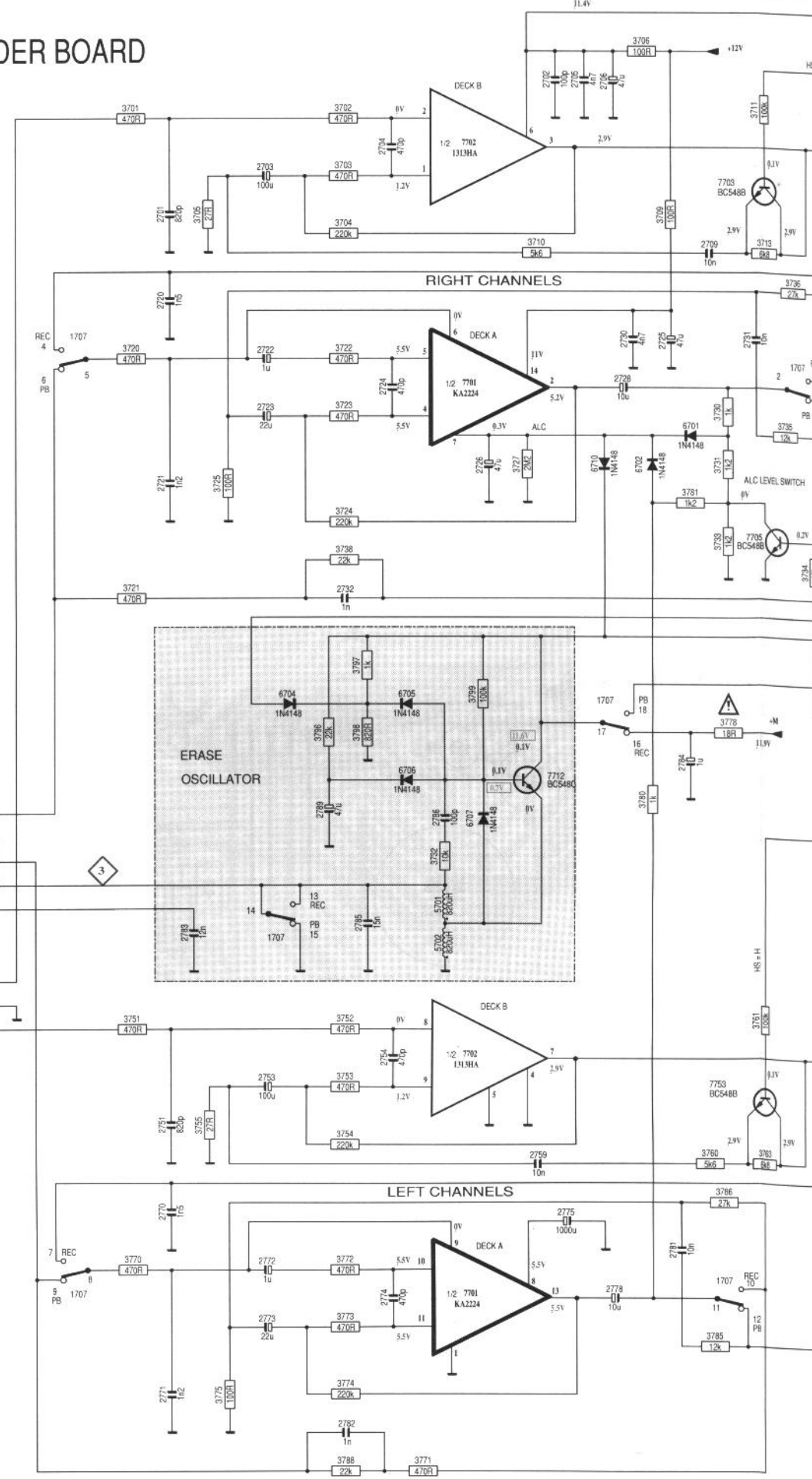


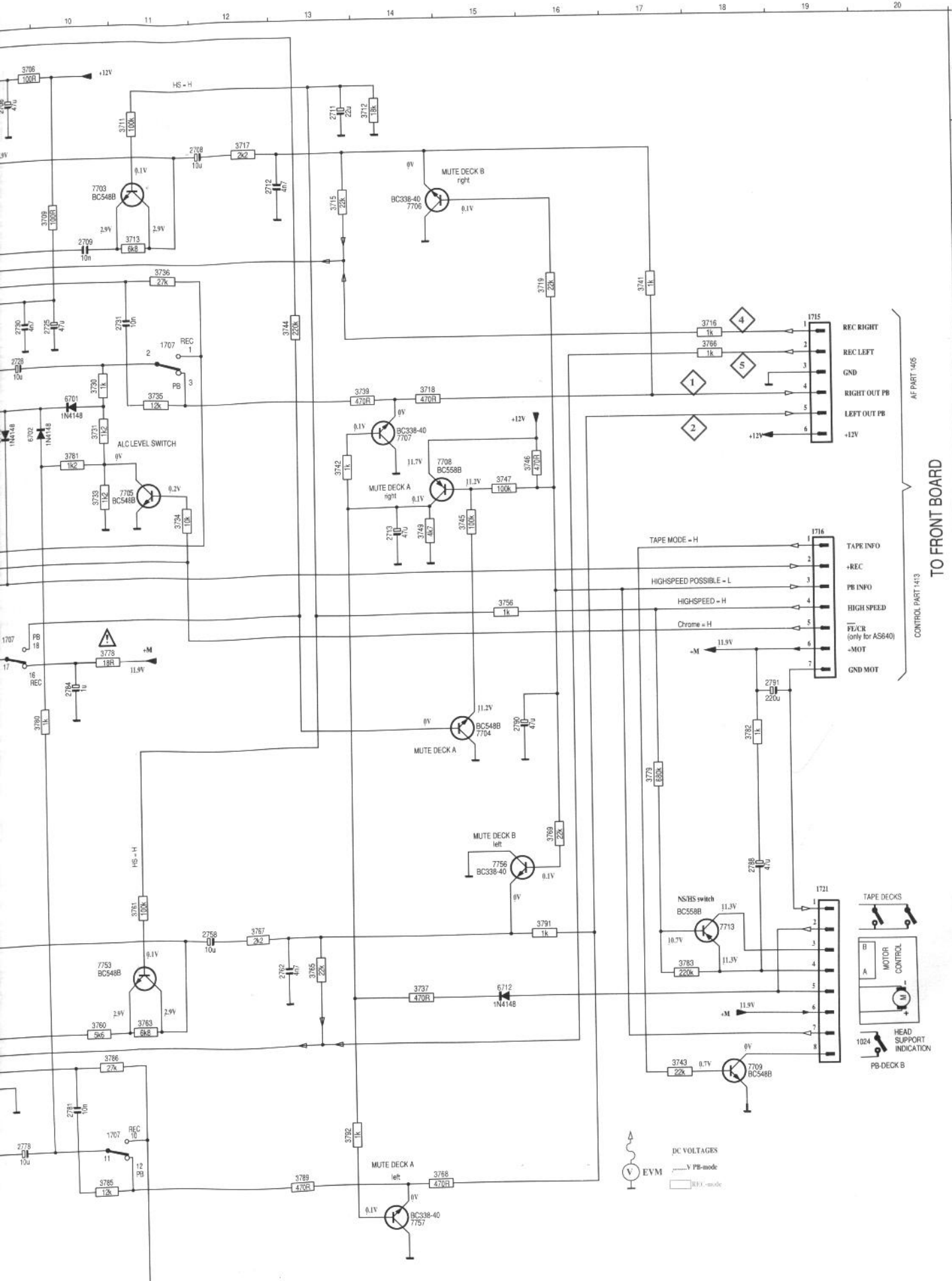
DC VOLTAGES
measured in
tuner mode

EVM

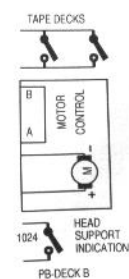
RECORDER BOARD

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

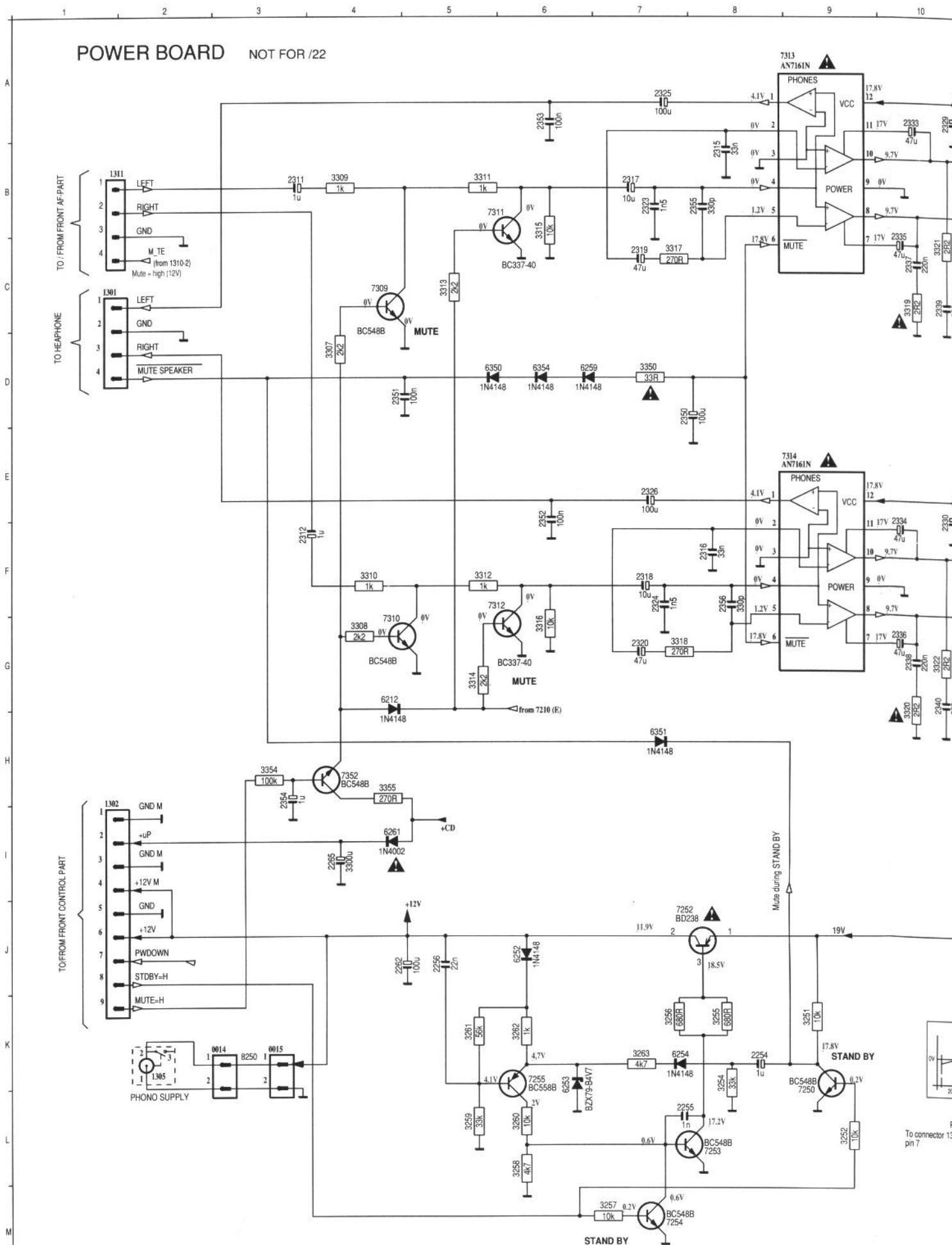




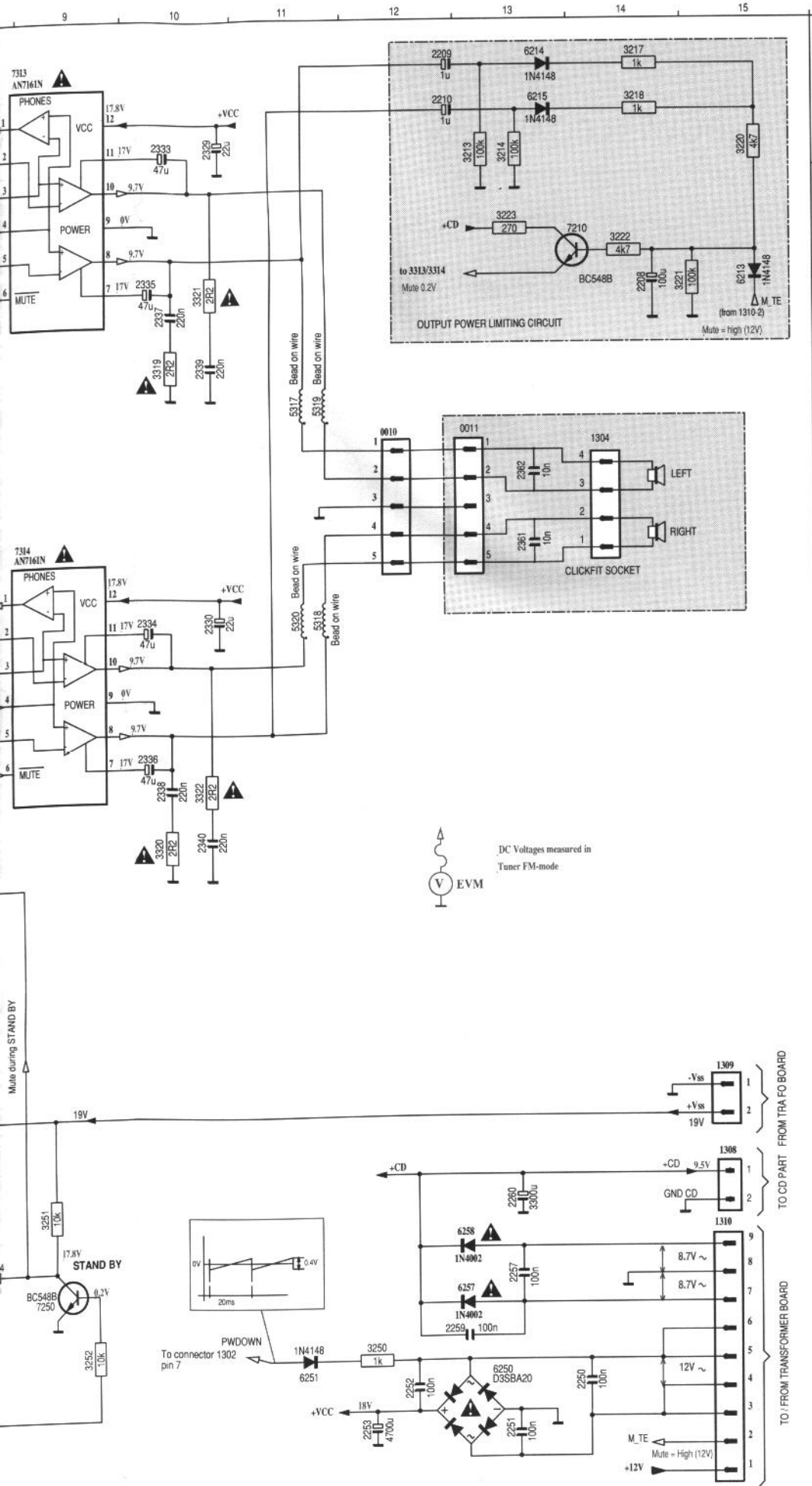
- AF PART: 405
- CONTROL PART 1413
- TO FRONT BOARD
- 1707 D11
 - 1707 M10
 - 1707 N 4
 - 1707 J 6
 - 1707 G 9
 - 1707 D 4
 - 1713 I 2
 - 1714 J 2
 - 1715 D18
 - 1716 F19
 - 1721 K19
 - 2701 B 5
 - 2702 A 9
 - 2703 B 6
 - 2705 A 9
 - 2706 A 8
 - 2708 B12
 - 2709 C10
 - 2711 A13
 - 2712 B13
 - 2713 F14
 - 2720 C 5
 - 2721 E 5
 - 2722 D 6
 - 2723 E 6
 - 2724 D 7
 - 2725 D10
 - 2726 E 8
 - 2728 D 9
 - 2730 D 9
 - 2731 D11
 - 2732 F 6
 - 2751 L 5
 - 2753 L 5
 - 2754 K 7
 - 2756 K12
 - 2759 L 8
 - 2762 L13
 - 2770 M 5
 - 2771 O 5
 - 2772 M 6
 - 2773 N 6
 - 2774 N 7
 - 2775 M 9
 - 2778 N 9
 - 2781 M10
 - 2782 O 6
 - 2783 J 4
 - 2784 H10
 - 2785 J 7
 - 2786 J18
 - 2789 I 7
 - 2790 I15
 - 2791 H16
 - 3701 A 4
 - 3702 A 6
 - 3703 B 6
 - 3704 B 6
 - 3705 B 5
 - 3706 A 9
 - 3708 B10
 - 3710 B 8
 - 3711 A11
 - 3712 A14
 - 3713 B11
 - 3715 B13
 - 3716 D18
 - 3717 B12
 - 3718 F14
 - 3719 C16
 - 3720 D 4
 - 3721 F 4
 - 3722 D 6
 - 3723 D 6
 - 3724 F 6
 - 3725 E 5
 - 3727 E 8
 - 3730 E10
 - 3731 E10
 - 3732 I 8
 - 3733 F10
 - 3734 F11
 - 3735 C11
 - 3736 C11
 - 3737 L14
 - 3738 F 6
 - 3739 E14
 - 3741 C17
 - 3742 F13
 - 3743 M17
 - 3744 D15
 - 3745 F15
 - 3746 F16
 - 3747 F15
 - 3749 F14
 - 3751 K 4
 - 3752 K 6
 - 3753 K 6
 - 3754 L 6
 - 3755 L 5
 - 3756 D15
 - 3760 L10
 - 3761 K11
 - 3763 L11
 - 3765 L18
 - 3766 D18
 - 3767 K12
 - 3768 N14
 - 3769 J16
 - 3770 M 4
 - 3771 O 7
 - 3772 M 6
 - 3773 N 6
 - 3774 O 6
 - 3775 O 5
 - 3778 H10
 - 3779 I17
 - 3780 I 9
 - 3781 E10
 - 3782 I18
 - 3783 L17
 - 3785 M10
 - 3786 M10
 - 3788 O 6
 - 3789 M13
 - 3791 K18
 - 3792 N13
 - 3796 H 6
 - 3797 G 7
 - 3798 H 7
 - 3799 G 8
 - 5701 J 8
 - 5702 J 8
 - 6708 E10
 - 6702 E 9
 - 6704 H 6
 - 6705 H 7
 - 6706 H 7
 - 6707 I 8
 - 6710 E 9
 - 6712 L15
 - 7701 N 8
 - 7701 D 8
 - 7706 B 8
 - 7702 K 8
 - 7703 B10
 - 7704 I15
 - 7705 F11
 - 7706 B14
 - 7707 E14
 - 7708 F14
 - 7709 M18
 - 7712 H 9
 - 7713 K18
 - 7753 K10
 - 7756 J15
 - 7757 O14



POWER BOARD NOT FOR /22



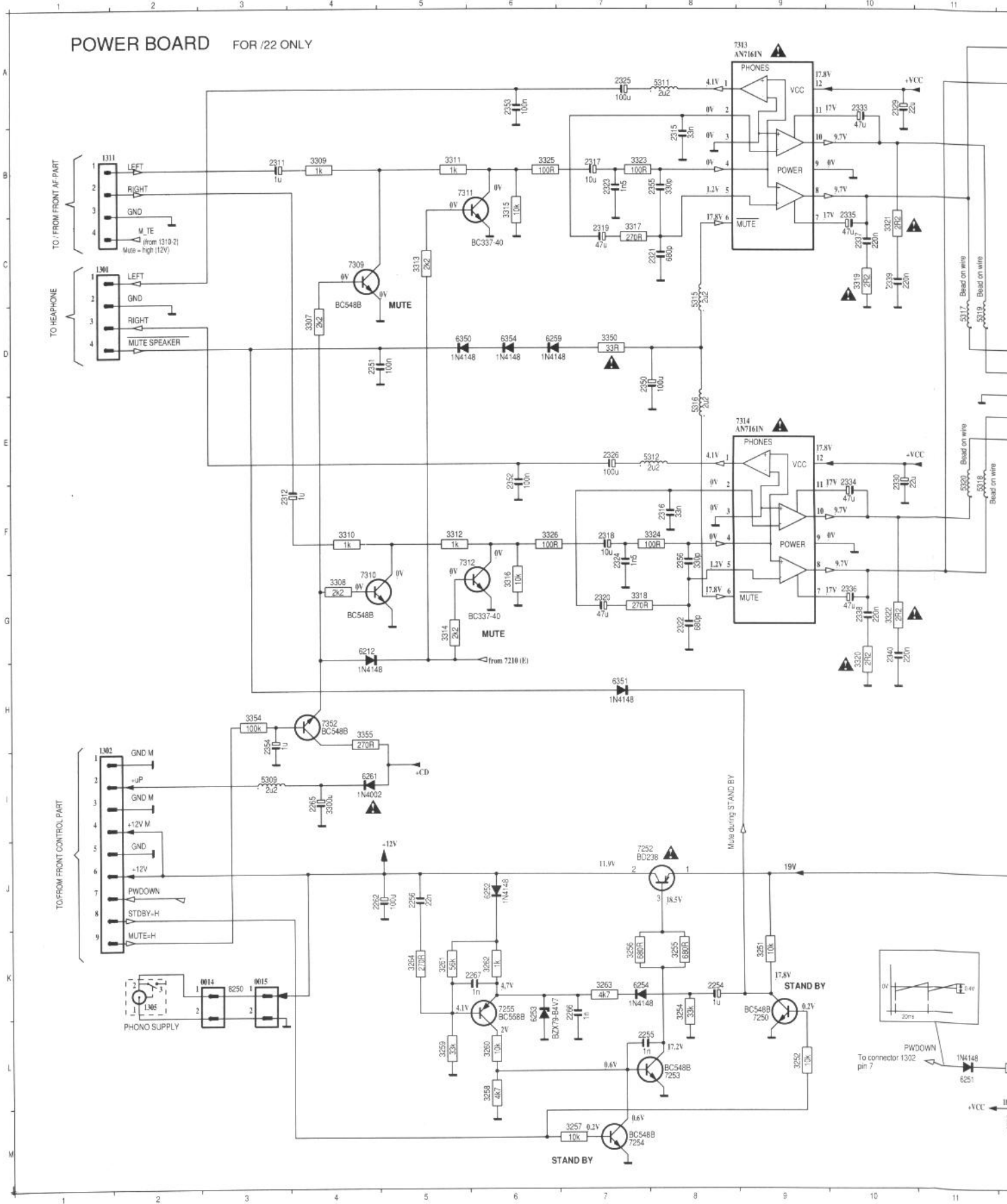
To connector 130 pin 7



0010	D12	3311	B5
0011	D13	3312	F5
0014	K2	3313	C5
0015	K3	3314	G5
		3315	C6
1301	D1	3316	G6
1302	I2	3317	C7
1304	D14	3318	G7
1305	K2	3319	C10
1308	L11	3320	G10
1310	J15	3321	C10
1311	B1	3322	G10
		3323	B7
2208	C14	3324	F7
2209	A12	3325	B6
2210	A12	3326	F6
2250	K13	3349	D13
2251	K13	3350	D7
2252	J12	3354	H3
2253	K12	3355	H4
2254	K8		
2255	L7	5309	I3
2256	J5	5311	A8
2257	L13	5312	E8
2259	L12	5315	D8
2260	L12	5316	E8
2262	J4	5317	D11
2265	I4	5318	E11
2311	B3	5319	D11
2312	F3	5320	E11
2315	B8		
2316	F8	6212	H5
2317	B7	6213	B15
2318	F7	6214	A13
2319	C7	6215	A13
2320	G7	6250	J13
2323	B7	6251	J10
2324	F7	6252	J6
2325	A7	6253	K6
2326	E7	6254	K7
2327	A8	6257	L13
2328	E8	6258	N11
2329	A10	6259	D6
2330	E10	6261	I4
2333	A10	6270	I10
2334	F10	6350	D5
2335	C10	6351	I7
2336	G10	6354	D6
2337	C10		
2338	G10	7210	B14
2339	C10	7250	K9
2340	G10	7252	J8
2345	E13	7253	L8
2346	D13	7254	M7
2350	D7	7255	K6
2351	D3	7309	C4
2352	D3	7310	G4
2353	C3	7311	B5
2354	H4	7312	F5
2355	B8	7313	A9
2356	F8	7314	E9
2361	E13	7352	H4
2362	D13		
3213	A13		
3214	A13		
3217	A14		
3218	A15		
3221	C15		
3222	B14		
3223	B13		
3250	J10		
3251	K9		
3252	L9		
3254	K8		
3255	K8		
3256	K7		
3257	M7		
3258	L6		
3259	L5		
3260	L6		
3261	K5		
3262	K6		
3263	K7		
3270	I10		
3307	D4		
3308	G4		
3309	B4		
3310	F4		

0010	D12	1305	K2	2210	A12	2256	J5	2267	K5	2319	C7	2326	E7	2336	G10	2352	F6	3213	A13	3223	B13	3257	M7	3264	K5	3312	F5	3319	C10	3320	G10	3321	G10	3322	G10	3323	G10	3324	G10	3325	G10	3326	G10	3327	G10	3328	G10	3329	G10	3330	G10	3331	G10	3332	G10	3333	G10	3334	G10	3335	G10	3336	G10	3337	G10	3338	G10	3339	G10	3340	G10	3341	G10	3342	G10	3343	G10	3344	G10	3345	G10	3346	G10	3347	G10	3348	G10	3349	G10	3350	G10	3351	G10	3352	G10	3353	G10	3354	G10	3355	G10	3356	G10	3357	G10	3358	G10	3359	G10	3360	G10	3361	G10	3362	G10	3363	G10	3364	G10	3365	G10	3366	G10	3367	G10	3368	G10	3369	G10	3370	G10	3371	G10	3372	G10	3373	G10	3374	G10	3375	G10	3376	G10	3377	G10	3378	G10	3379	G10	3380	G10	3381	G10	3382	G10	3383	G10	3384	G10	3385	G10	3386	G10	3387	G10	3388	G10	3389	G10	3390	G10	3391	G10	3392	G10	3393	G10	3394	G10	3395	G10	3396	G10	3397	G10	3398	G10	3399	G10	3400	G10
------	-----	------	----	------	-----	------	----	------	----	------	----	------	----	------	-----	------	----	------	-----	------	-----	------	----	------	----	------	----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----	------	-----

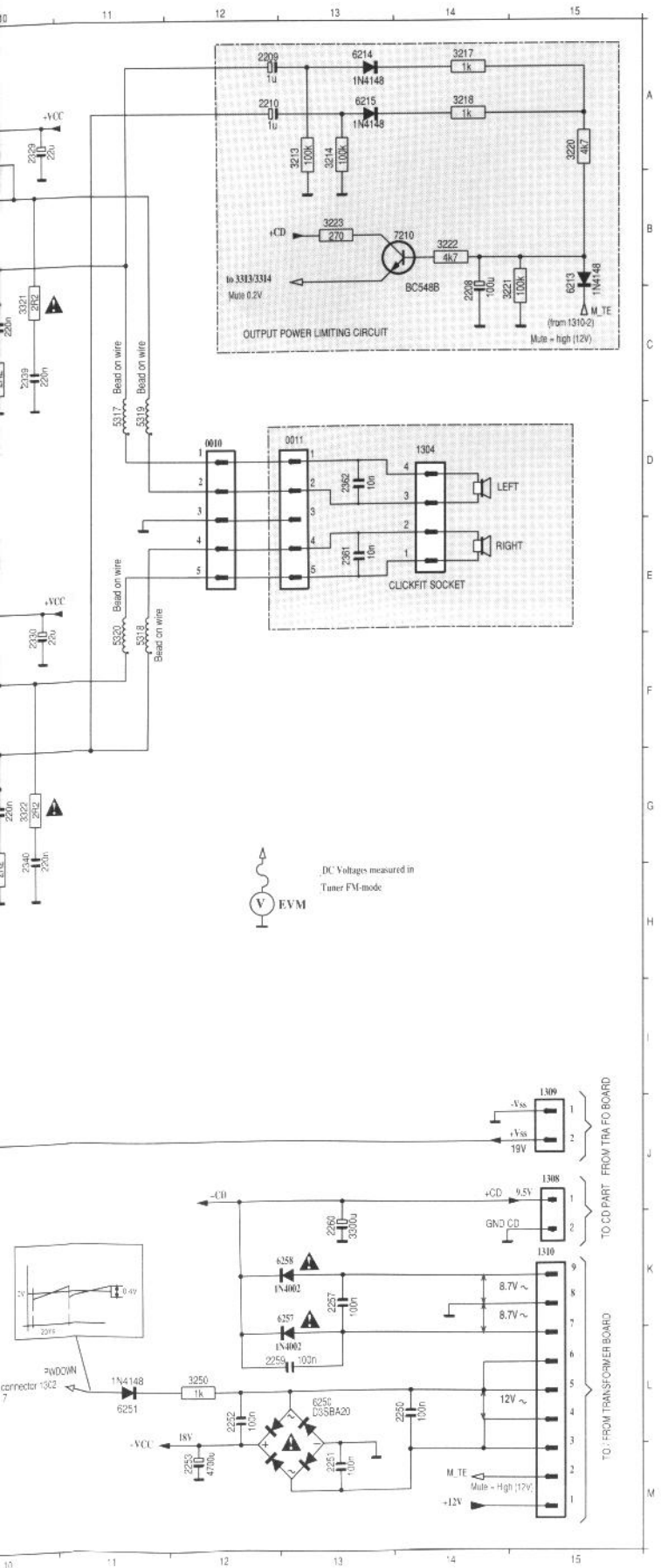
POWER BOARD FOR /22 ONLY



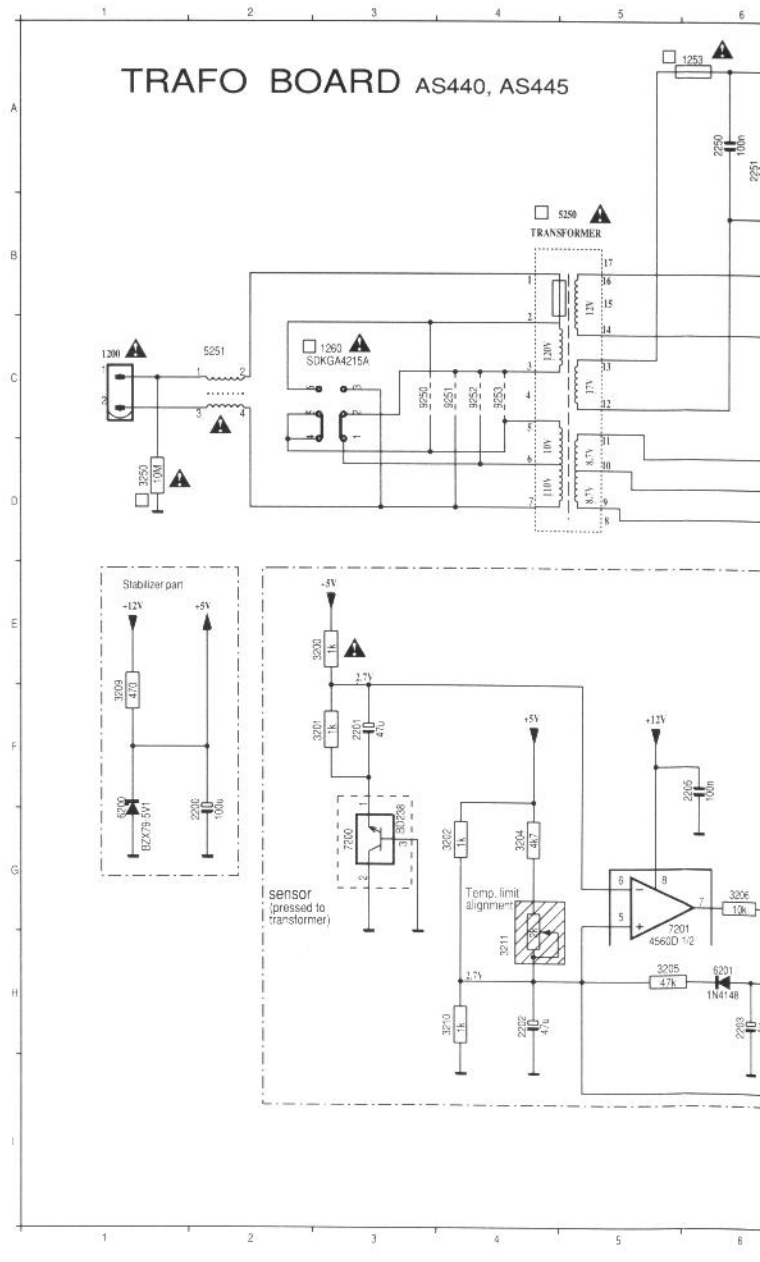
3312	F5	3319	C10	3326	F6	5315	D8	6213	B15	6254	K7	6354	D6	7309	C4
3313	C5	3320	G10	3350	D7	5316	E8	6214	A13	6257	K13	7210	B14	7310	G4
3314	G5	3321	C10	3354	H3	5317	D11	6215	A13	6258	N11	7250	K9	7311	B5
3315	C6	3322	G10	3355	H4	5318	E11	6250	L13	6259	D6	7252	J8	7312	F5
3316	G6	3323	B7	5309	I3	5319	D11	6251	L11	6261	I4	7253	L8	7313	A9
3317	C7	3324	F8	5311	A8	5320	E11	6252	J6	6350	D5	7254	M7	7314	E9
3318	G7	3325	B6	5312	E8	6212	G4	6253	K6	6351	H7	7255	K6	7352	H4

□ Components depending on version

VERSION	COMPONENTS					
	□	3250	1260	9253	9252	9251
/20 (IEC 230V)					×	
/25 (240V)				×		
/37 (UL 120V)		×				×
/21 /30 (120V,230V)			×			×



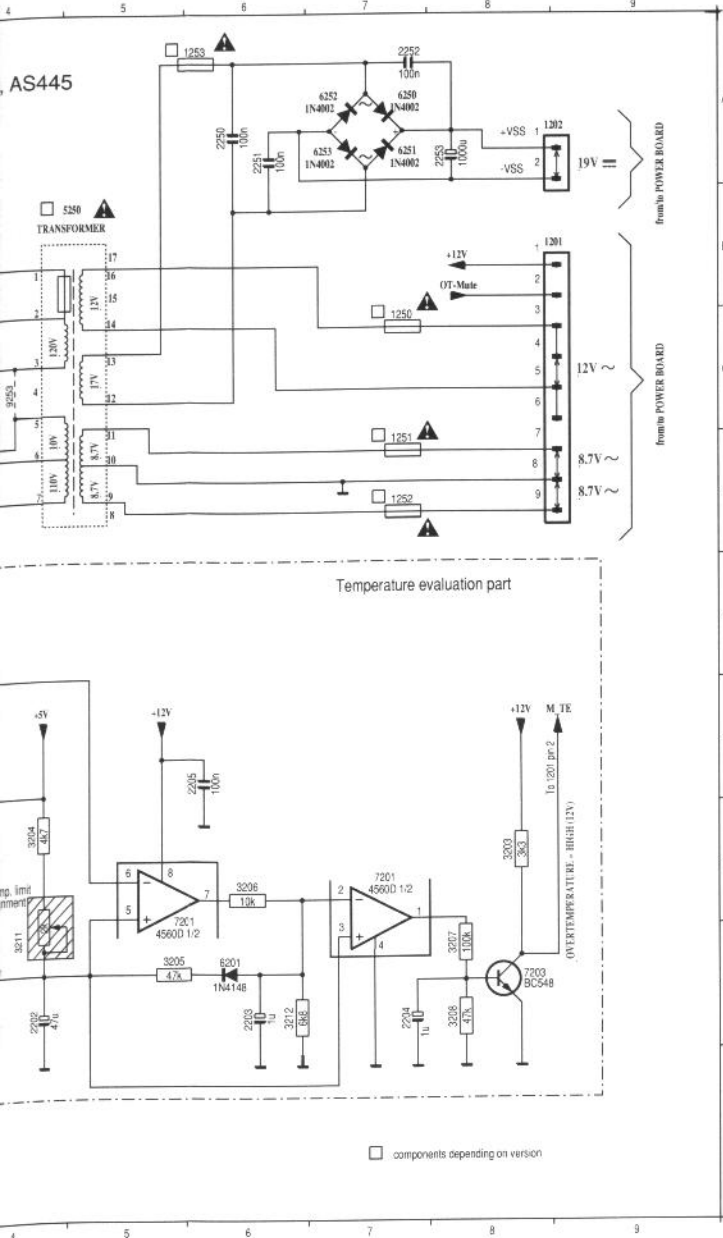
TRAF BOARD AS440, AS445



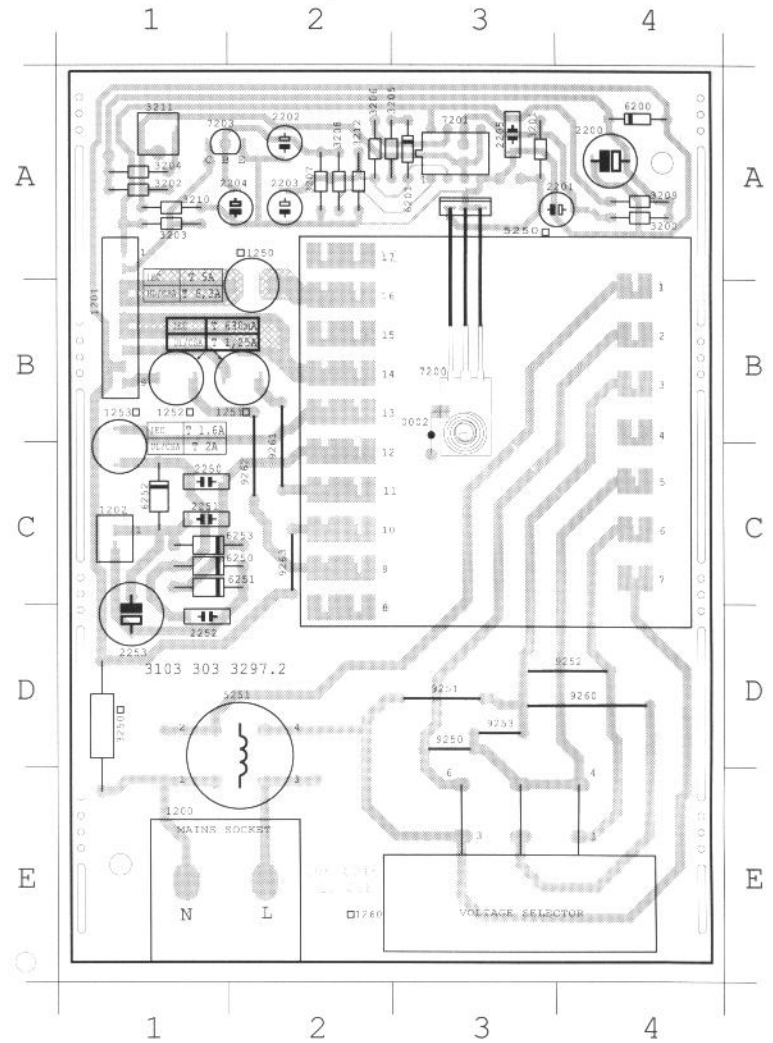
1200	C 1	1253	A 6	2204	H 7	3200	F 3	3206	G 6	3212	H 6	6250	A
1201	B 8	1260	C 3	2205	F 6	3201	F 3	3207	H 8	3250	D 1	6251	A
1202	A 8	2200	F 2	2250	A 6	3202	G 4	3208	H 8	5250	B 5	6252	A
1250	C 7	2201	F 3	2251	A 6	3203	G 8	3209	F 1	5251	C 2	6253	A
1251	D 7	2202	H 4	2252	A 7	3204	G 4	3210	H 4	6200	F 1	7200	G
1252	D 7	2203	H 5	2253	A 8	3205	H 5	3211	H 4	6201	H 6	7201	G

on version

						VALUE OF FUSE			
1260	9253	9252	9251	9250	9260	1250	1251	1252	1253
		×				5A	630mA	630mA	1.6A
	×					5A	630mA	630mA	1.6A
×			×	×		6.3A	1.25A	1.25A	2A
×					×	5A	630mA	630mA	1.6A



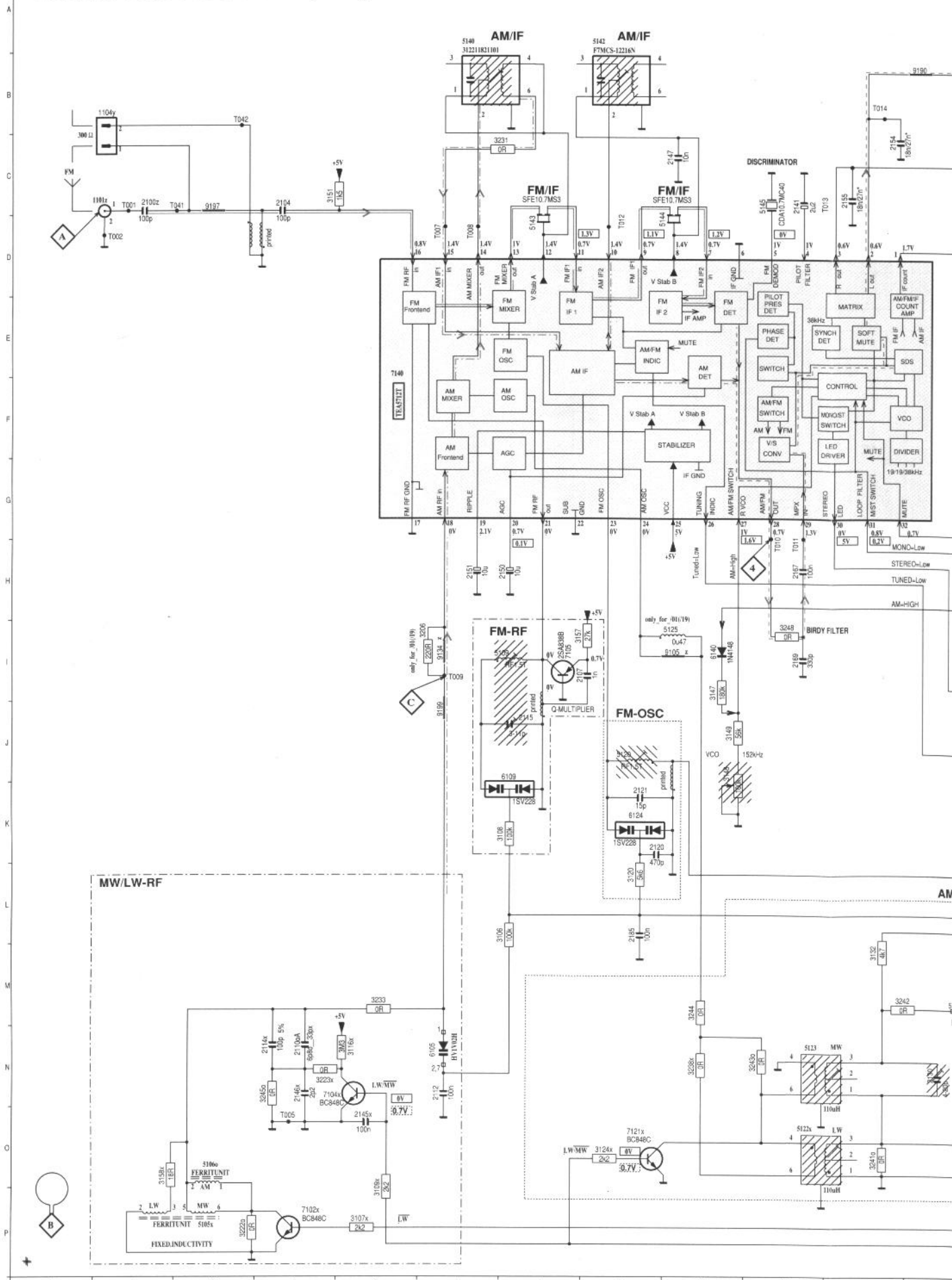
TRAF0 BOARD Component side view

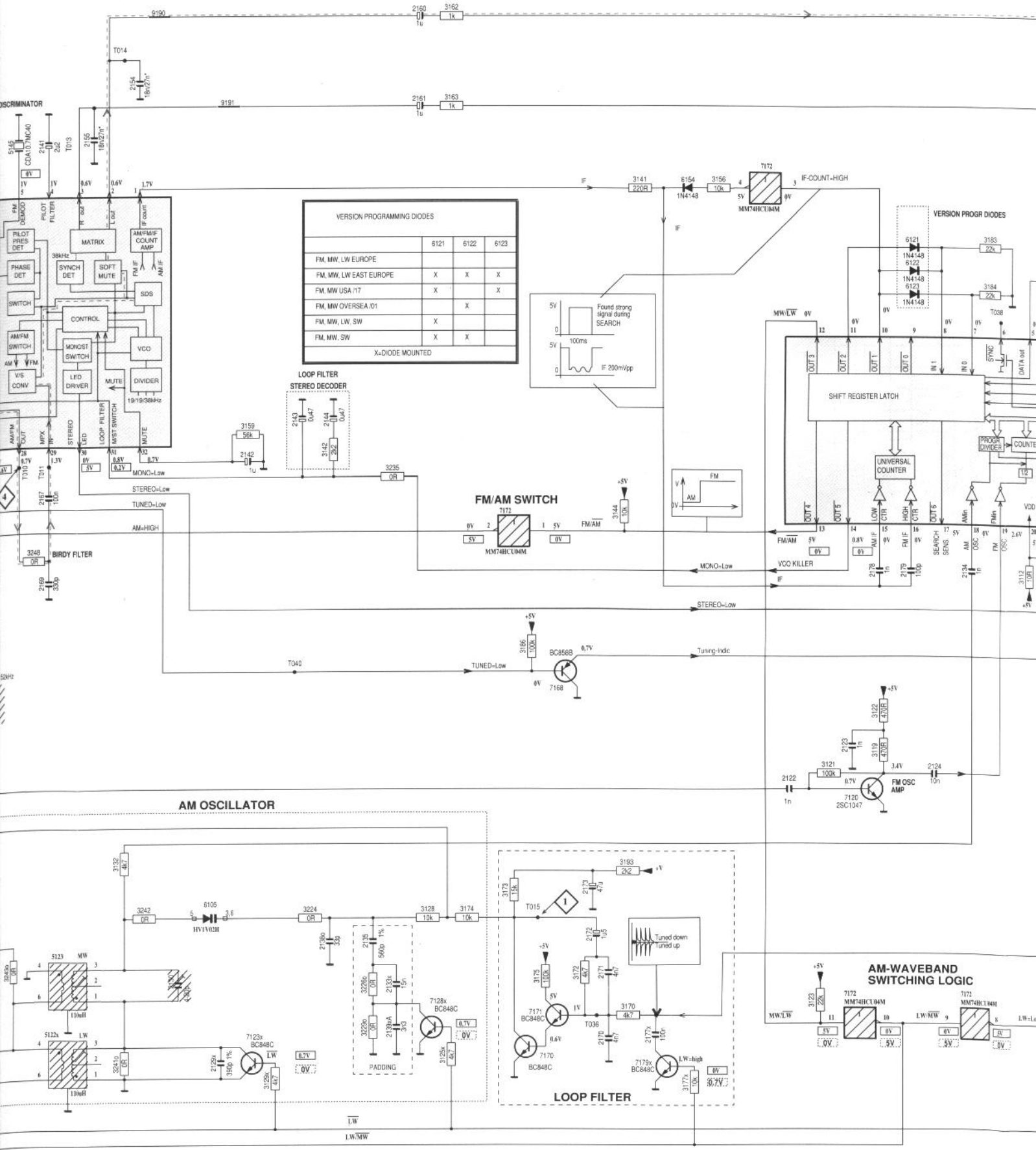


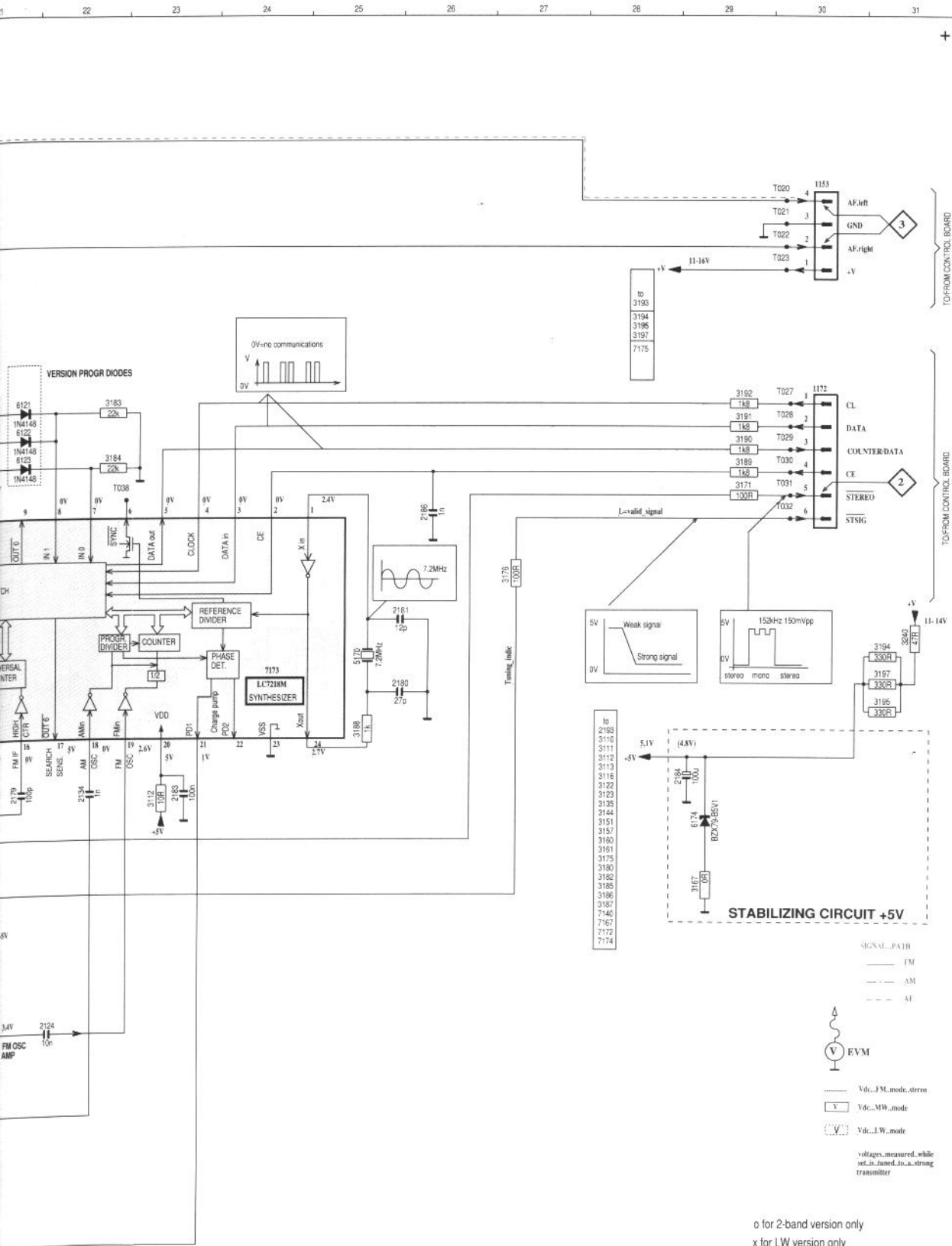
1200 E 1	1260 E 4	2250 C 1	3203 A 1	3210 A 1	6201 A 3	7203 A 1	9260 D 3
1201 A 1	2200 A 4	2251 C 1	3204 A 1	3211 A 1	6250 C 1	9250 D 3	9261 C 2
1202 C 1	2201 A 4	2252 D 1	3205 A 2	3212 A 2	6251 C 1	9251 D 3	9262 C 2
1250 B 2	2202 A 2	2253 D 1	3206 A 2	3250 D 1	6252 C 1	9252 D 4	9263 C 2
1251 B 2	2203 A 2	3200 A 4	3207 A 2	5250 B 3	6253 C 1	9253 D 3	
1252 B 1	2204 A 2	3201 A 3	3208 A 2	5251 E 1	7200 A 3	9255 E 1	
1253 B 1	2205 A 3	3202 A 1	3209 A 4	6200 A 4	7201 A 3	9256 E 2	

3200 E 3	3206 G 6	3212 H 6	6250 A 7	7201 G 5	9250 C 3
3201 F 3	3207 H 8	3250 D 1	6251 A 7	7203 H 8	9251 C 4
3202 G 4	3208 H 8	5250 B 5	6252 A 7		9252 C 4
3203 G 8	3209 F 1	5251 C 2	6253 A 7		9253 C 4
3204 G 4	3210 H 4	6200 F 1	7200 G 3		9255 C 2
3205 H 5	3211 H 4	6201 H 6	7201 G 7		9256 D 2

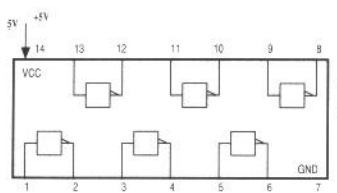
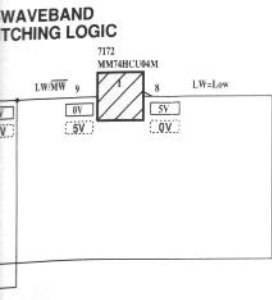
TUNER UNIT ECO4-VA (MIDI)







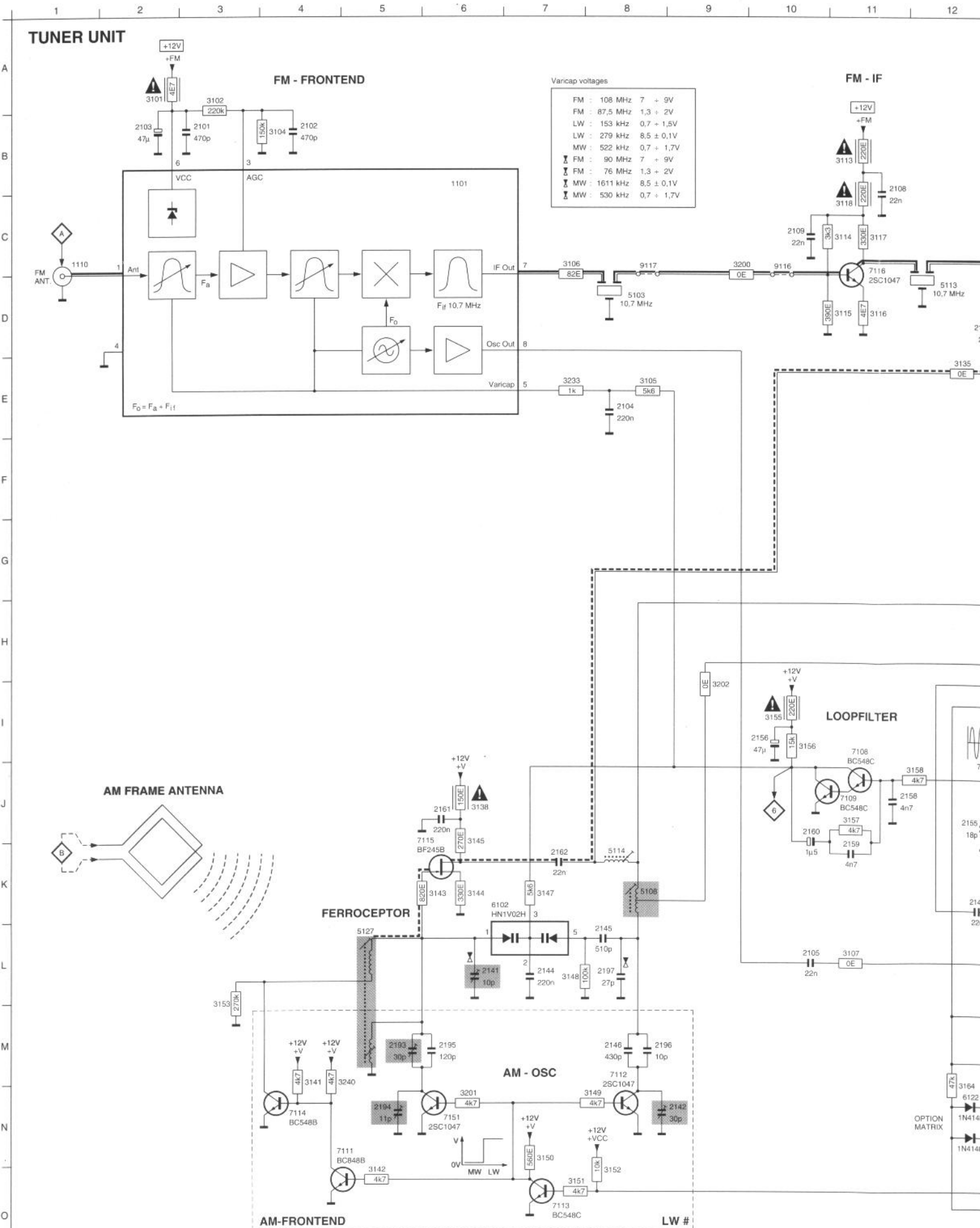
- 1101z C 1
- 1104z C 2
- 1153 B30
- 1172 D30
- 2100z C 2
- 2104 C 4
- 2107 I 8
- 2119z N 4
- 2112 N 6
- 2114z N 4
- 2115 J 7
- 2120 K 8
- 2121 K 8
- 2122 K20
- 2123 K20
- 2124 K22
- 2129z C12
- 2130 N12
- 2133z N15
- 2134 I22
- 2135 N14
- 2138z N14
- 2138z O15
- 2141 C10
- 2142 G13
- 2143 G13
- 2144 G14
- 2145z O 5
- 2149z N 4
- 2147 C 9
- 2150 H 7
- 2151 H 6
- 2154 C11
- 2155 C12
- 2160 B15
- 2161 C15
- 2167 H10
- 2169 I10
- 2170 I21
- 2171 N17
- 2172 M17
- 2173 M17
- 2177z O18
- 2178 I21
- 2179 I21
- 2180 H25
- 2181 Q25
- 2183 I23
- 2184 I29
- 2185 L 8
- 2186 F26
- 3105 L 7
- 3107z P 5
- 3108 K 7
- 3109z O 5
- 3112 I25
- 3115z L 4
- 3118 K21
- 3119 L 8
- 3121 K20
- 3122 K21
- 3123 N20
- 3124z O 8
- 3125z O15
- 3128 M15
- 3129z O13
- 3132 M12
- 3141 D18
- 3142 C14
- 3144 H18
- 3147 I 9
- 3148 L 9
- 3149 J 9
- 3151 C 4
- 3154 I21
- 3157 I 7
- 3158z O 2
- 3159 O15
- 3162 D15
- 3163 C15
- 3167 I29
- 3170 N18
- 3171 F29
- 3172z N 7
- 3173 M16
- 3174 M16
- 3175 N17
- 3176 I22
- 3177z O18
- 3183 E22
- 3184 E22
- 3188 I14
- 3188 H25
- 3189 E29
- 3190 E29
- 3191 E29
- 3192 E29
- 3193 M16
- 3194 G31
- 3195 H31
- 3197 H31
- 3206 I 6
- 3222z P 3
- 3223z N 4
- 3224 M14
- 3226z N14
- 3229z O14
- 3231 C 7
- 3233 M 5
- 3235 H15
- 3238z N 9
- 3240 G31
- 3241z O11
- 3242 N11
- 3243z N10
- 3244 M 9
- 3245z N 4
- 3248 I 0
- 5105z P 2
- 5109z O 3
- 5109 I 7
- 5120 L 8
- 5122z O10
- 5123 N10
- 5125 L 9
- 5140 A 9
- 5142 A 8
- 5143 D 7
- 5144 D 9
- 5146 C10
- 5170 G25
- 6105 M12
- 6105 N5
- 6109 J 7
- 6121 E21
- 6122 E21
- 6123 E21
- 6124 K 8
- 6140 I 9
- 6154 D18
- 6174 I26
- 7102z P 4
- 7104z N 5
- 7105 I 7
- 7120 L20
- 7121z O 8
- 7123z O13
- 7125z N15
- 7140 E 5
- 7166 J 7
- 7170 C17
- 7172 H18
- 7172 I23
- 7172 O20
- 7172 N22
- 7172 N23
- 7172 O22
- 7173 H24
- 7173z O18
- 9105 I 18
- 9134 I 8
- 9190 B12
- 9191 C13
- 9197 C 3
- 9199 J 6
- T001 C 2
- T002 D 2
- T005 O 4
- T007 D 6
- T008 D 6
- T009 I 9
- T010 H10
- T011 H10
- T012 C 6
- T013 C11
- T014 B11
- T015 M16
- T020 I29
- T021 C29
- T022 C29
- T023 C29
- T027 D30
- T028 E30
- T029 E30
- T030 E30
- T031 E30
- T032 F30
- T036 O17
- T038 F22
- T040 J13
- T041 C 2
- T042 B 3



o for 2-band version only
 x for LW version only
 *y for USA version only
 z not for all versions

- SIGNAL PATH
- FM
- AM
- AF
- EVM
- Vdc.FM.mode.stern
- Vdc.MW.mode
- Vdc.LW.mode
- voltages measured while set to tuned to a strong transmitter

TUNER UNIT

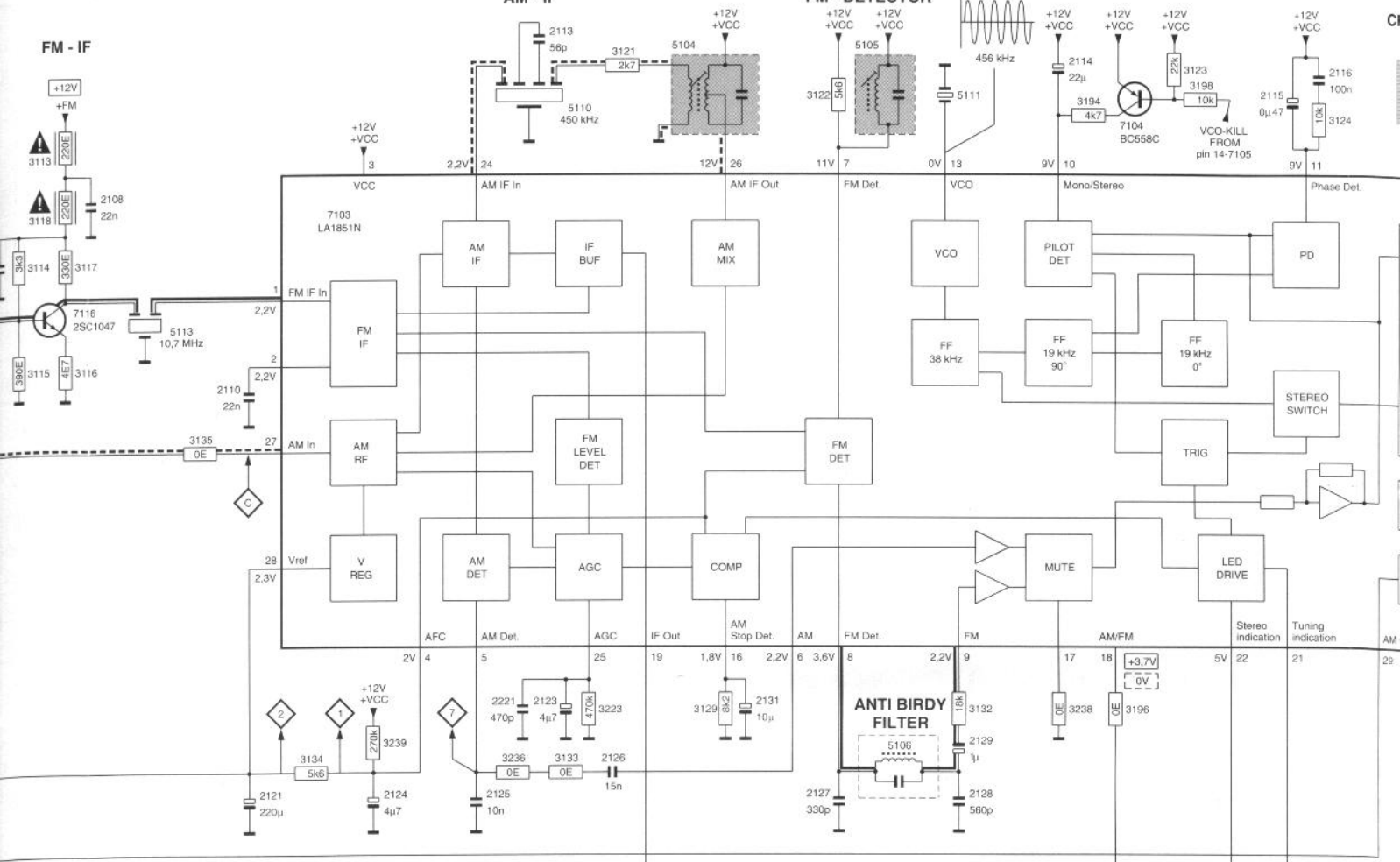


11 12 13 14 15 16 17 18 19 20 21 22

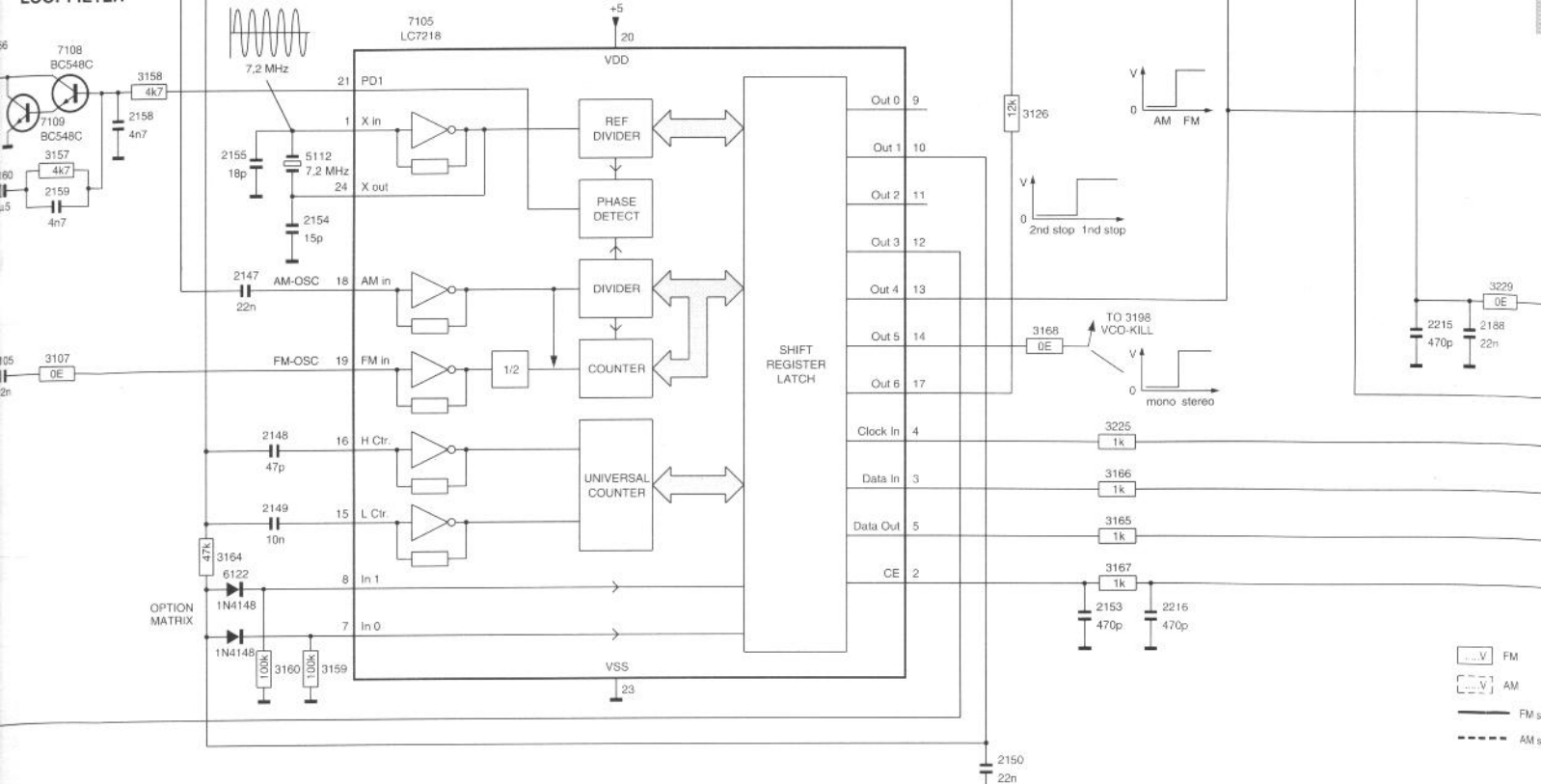
FM - IF

AM - IF

FM - DETECTOR

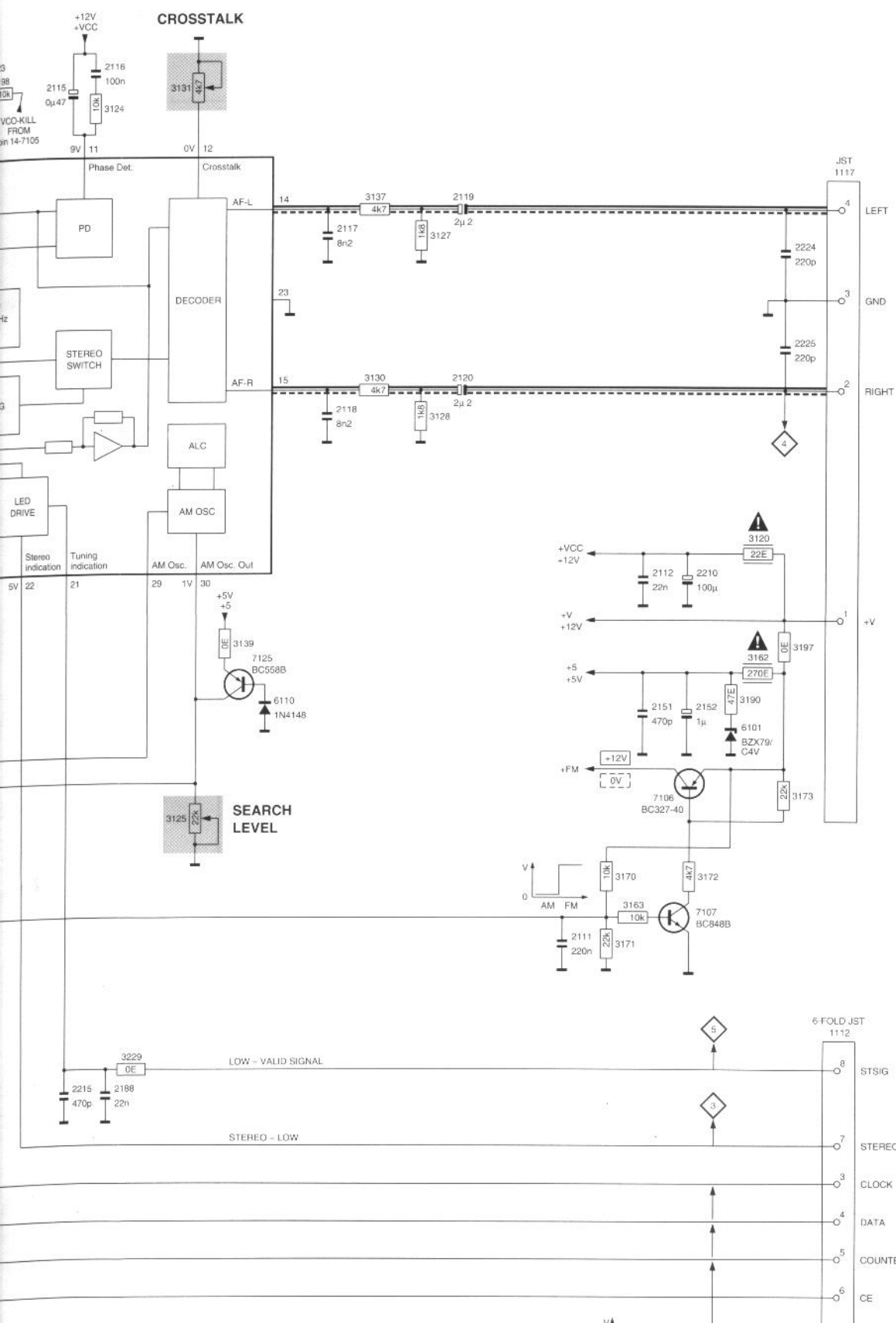


LOOPFILTER

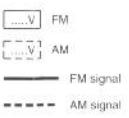


FM
 AM
 FM s
 AM s

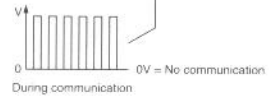
22 23 24 25 26 27 28 29 30



- A 1101 B6 3190 H29
- 1110 C1 3194 B20
- 1112 K30 3196 G30
- 1117 B30 3197 G29
- 2101 B3 3198 A21
- 2102 B4 3200 C9
- 2103 B2 3201 N6
- 2104 E8 3202 I9
- 2105 L10 3223 G16
- 2108 B11 3225 L19
- 2109 C10 3229 K22
- 2110 D12 3233 E7
- 2111 J27 3236 G15
- 2112 F28 3238 G20
- 2113 A15 3239 G14
- 2114 A20 3240 N4
- 2115 B22 5103 D8
- 2116 A22 5104 A16
- 2117 C25 5105 A18
- 2118 E25 5106 G18
- 2119 C26 5108 K8
- 2120 D26 5110 B15
- 2121 H13 5111 B19
- 2123 G15 5112 J13
- 2124 H14 5113 D12
- 2125 H15 5114 K8
- 2126 G16 5127 L5
- 2127 H18 6101 H29
- 2128 H19 6102 K6
- 2129 G19 6110 H24
- 2131 G17 6122 N12
- 2141 L6 7103 C13
- 2142 N9 7104 B20
- 2144 L7 7105 I14
- 2145 L8 7106 I28
- 2146 M8 7107 J28
- 2147 K12 7108 I11
- 2148 M12 7109 J11
- 2149 M12 7111 N4
- 2150 O18 7112 M8
- 2151 H28 7113 O7
- 2152 H28 7114 N4
- 2153 N19 7115 K5
- 2154 K13 7116 C11
- 2155 J12 7125 G24
- 2156 I10 7151 N6
- 2158 J11 9116 C10
- 2159 K11 9117 C8
- 2160 J10
- 2161 J6
- 2162 K7
- 2188 L22
- 2193 M5
- 2194 N5
- 2195 M6
- 2196 M8
- 2197 L8
- 2210 F28
- 2215 L22
- 2216 N20
- 2221 G15
- 2224 C29
- 2225 D29
- 3101 A2
- 3102 A3
- 3104 B4
- 3105 E8
- 3106 C7
- 3107 L11
- 3113 B11
- 3114 C11
- 3115 D11
- 3116 D11
- 3117 C11
- 3118 C11
- 3120 F29
- 3121 A16
- 3122 B18
- 3123 A21
- 3124 B22
- 3125 I23
- 3126 J19
- 3127 C26
- 3128 E26
- 3129 G17
- 3130 D25
- 3131 B23
- 3132 G19
- 3133 G15
- 3134 G13
- 3135 E12
- 3137 C25
- 3138 J6
- 3139 G24
- 3141 N4
- 3142 O5
- 3143 K6
- 3144 K6
- 3145 K6
- 3147 K7
- 3148 L7
- 3149 N7
- 3150 N7
- 3151 O7
- 3152 O8
- 3153 M3
- 3155 I10
- 3156 I10
- 3157 J11
- 3158 J11
- 3159 N13
- 3160 N13
- 3162 G29
- 3163 J27
- 3164 N12
- 3165 M19
- 3166 M19
- 3167 N19
- 3168 L19
- 3170 J27
- 3171 J27
- 3172 J28
- 3173 I29



option diodes		
	6122	6123
Europe	-	-
Japan	x	x
x = Diode mounted		



⚡ Only for JAPAN
Not for JAPAN

Dismantling hints CD Short Loader

Dismantling the tray

- a) Press open/close button to open the tray. If the tray doesn't work, use a small screw driver as shown in Fig.1 point 1 to move the tray outside. After the first centimeter it is possible to pull the tray out by hand.
- b) Release two snaps and remove tray.

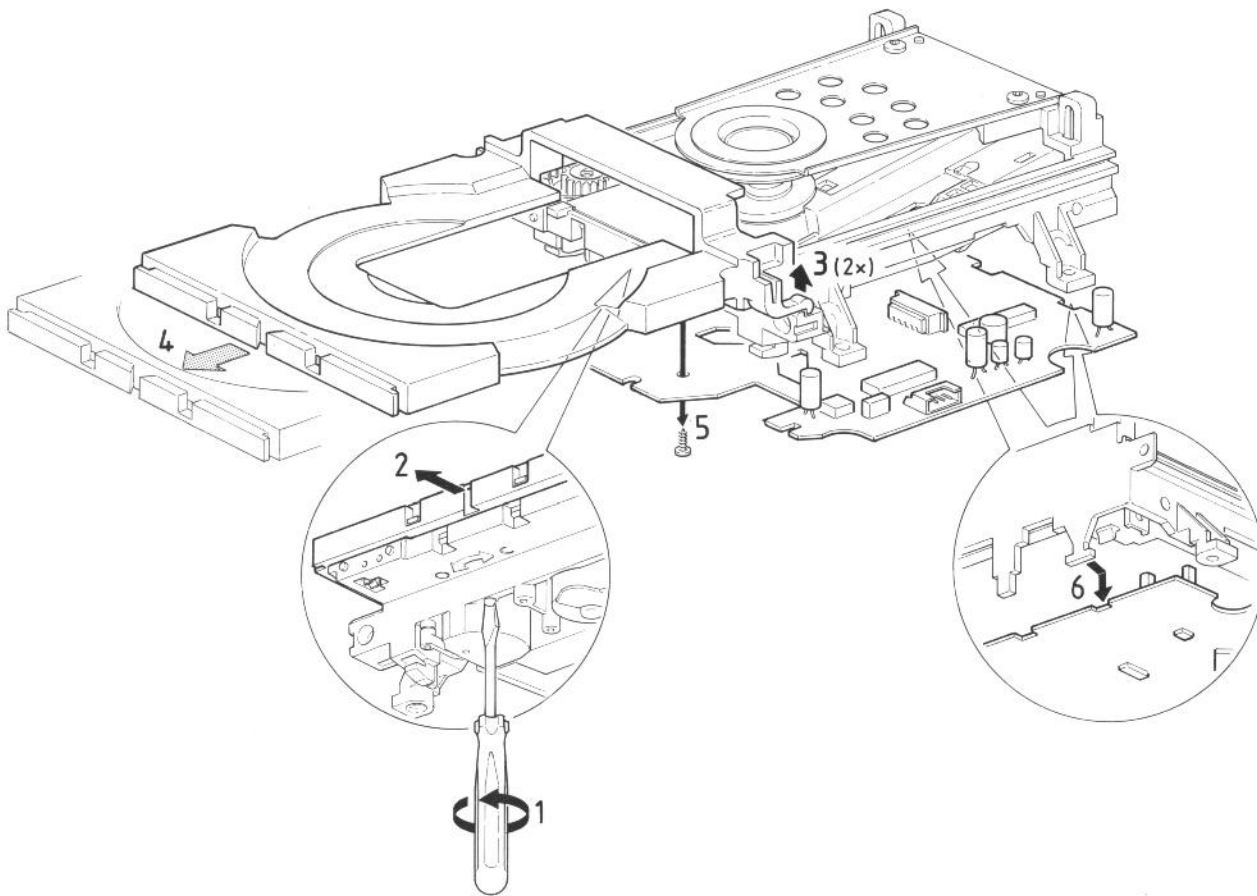
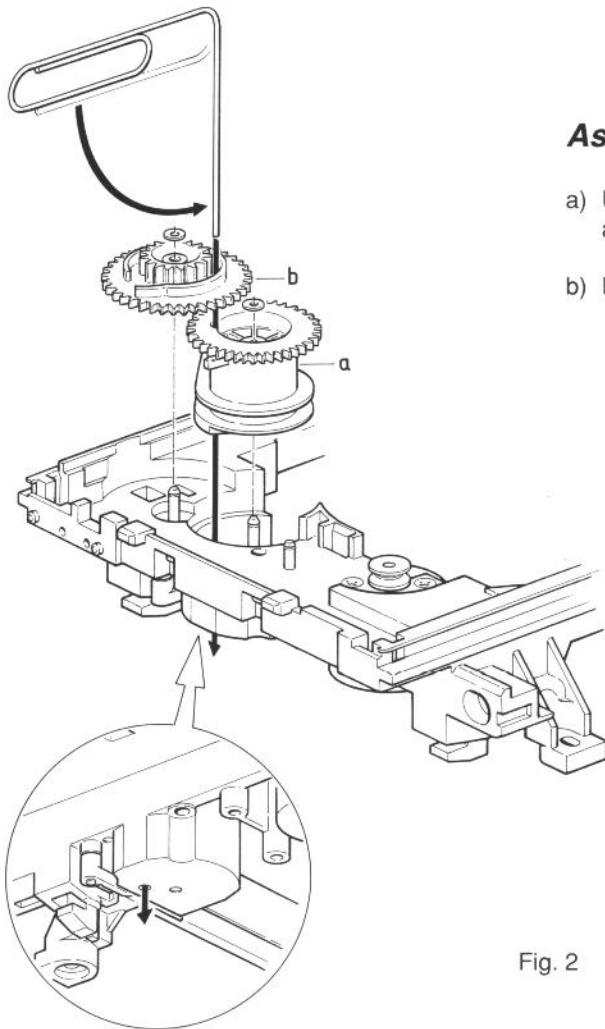


Fig. 1



Assembly of gear

- a) Use a pin (e.g. a paperclip) to align the cam wheel (a) and the gear wheel (b) together. See Fig. 2.
- b) Fix the wheels with the small plastic washers.

Fig. 2

- c) Mount idle wheel2 (c) and idle wheel1 (d) in any position. See Fig. 3.
- d) Fix the idle wheel1 with the small plastic washer.
- e) Mount the driving belt.

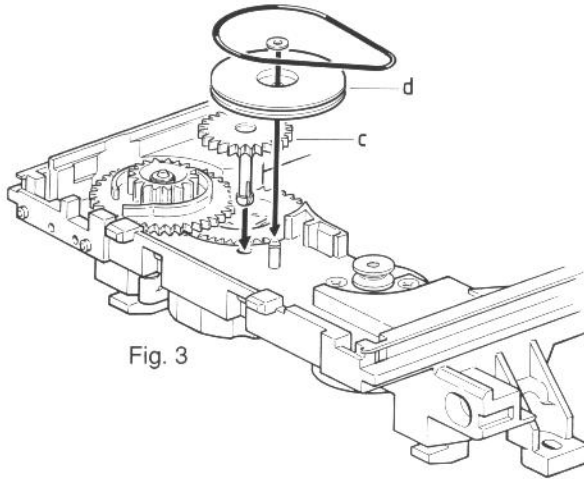


Fig. 3

wheel (a)

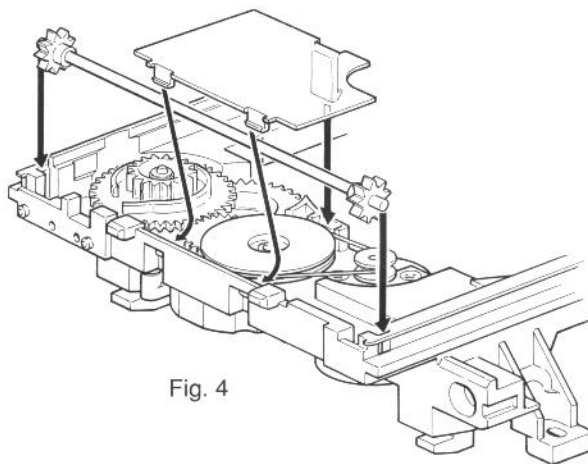


Fig. 4

- f) Mount the pinion guiding assy and the cover as shown in Fig. 4.
- g) Turn the gear wheel (b) counter clockwise to endposition.

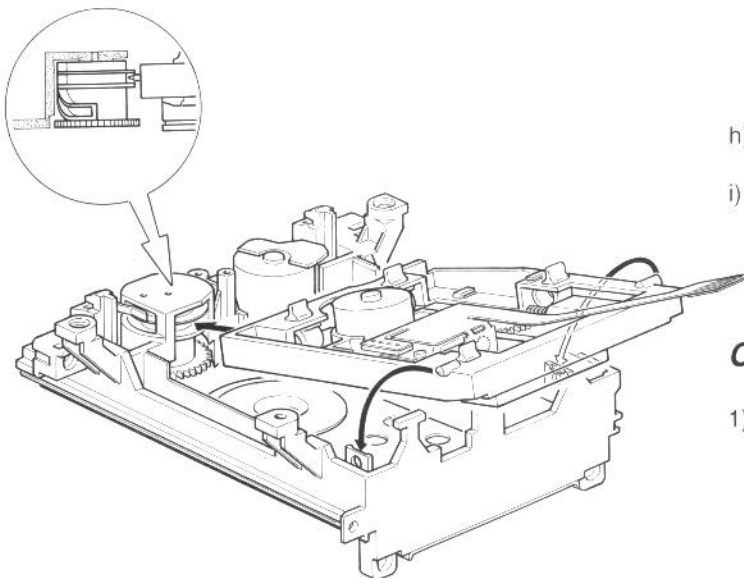


Fig. 5

- h) Mount the CD Mechanism as shown in Fig. 5.
- i) Mount the tray. (Align the tray to the chassis and push it inside)

Check if tray mechanism works correct!

- 1) Turn the gear wheel (b) clockwise to its endposition. (Use a small screwdriver as shown in Fig. 1 point 1)

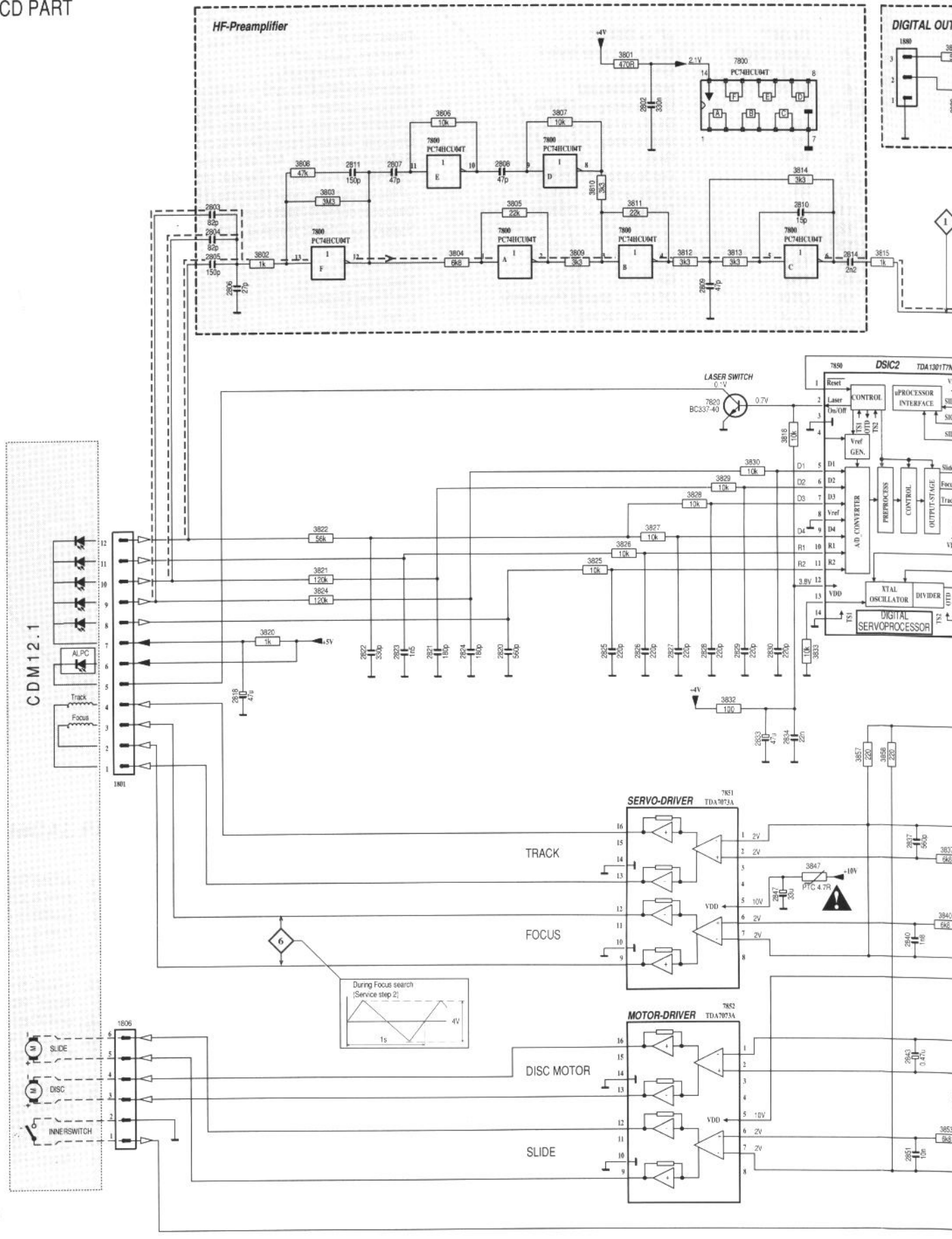
The tray has to move to inner position first and than the CD Mechanism has to move to its upper position.

- 2) Turn the gear wheel (b) counter clockwise to its endposition.

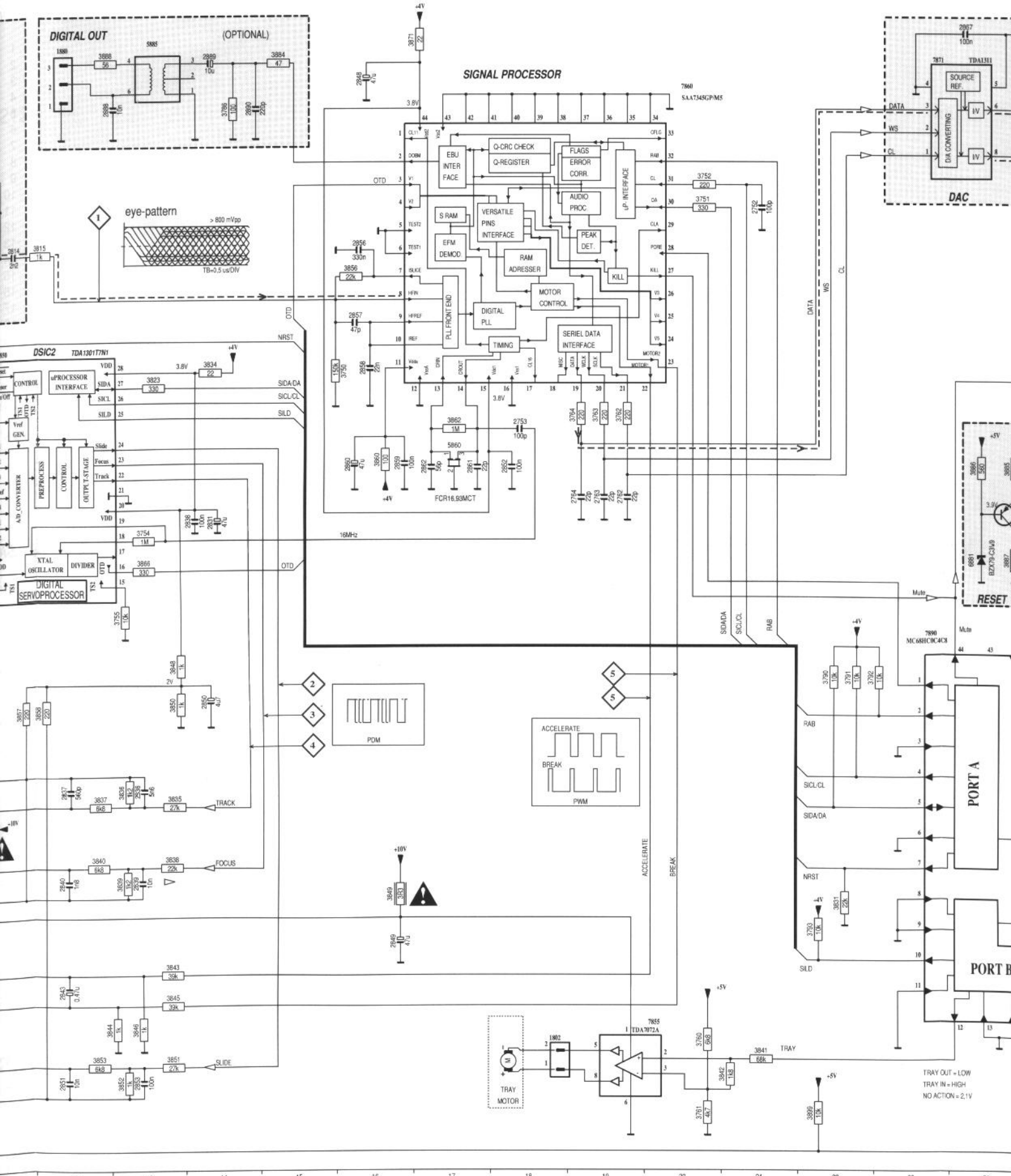
The CD Mechanism has to move to its lower position first and than the tray has to move to outside.

1801 J2	1806 O2	2752 C21	2764 G19	2803 C3	2807 C6	2811 C5	2821 H6	2825 H8	2829 H10	2834 J10
1802 N18	1810 J30	2753 F18	2769 B26	2804 C3	2808 C7	2814 D11	2822 H5	2826 H9	2830 H10	2836 K13
1804 F32	1820 J30	2762 G19	2770 D26	2805 D3	2809 D9	2818 I4	2823 H6	2827 H9	2831 H14	2837 K12
1805 G32	1880 A12	2763 G19	2802 B9	2806 D4	2810 C11	2820 H7	2824 H6	2828 H9	2833 J10	2838 H14

CD PART

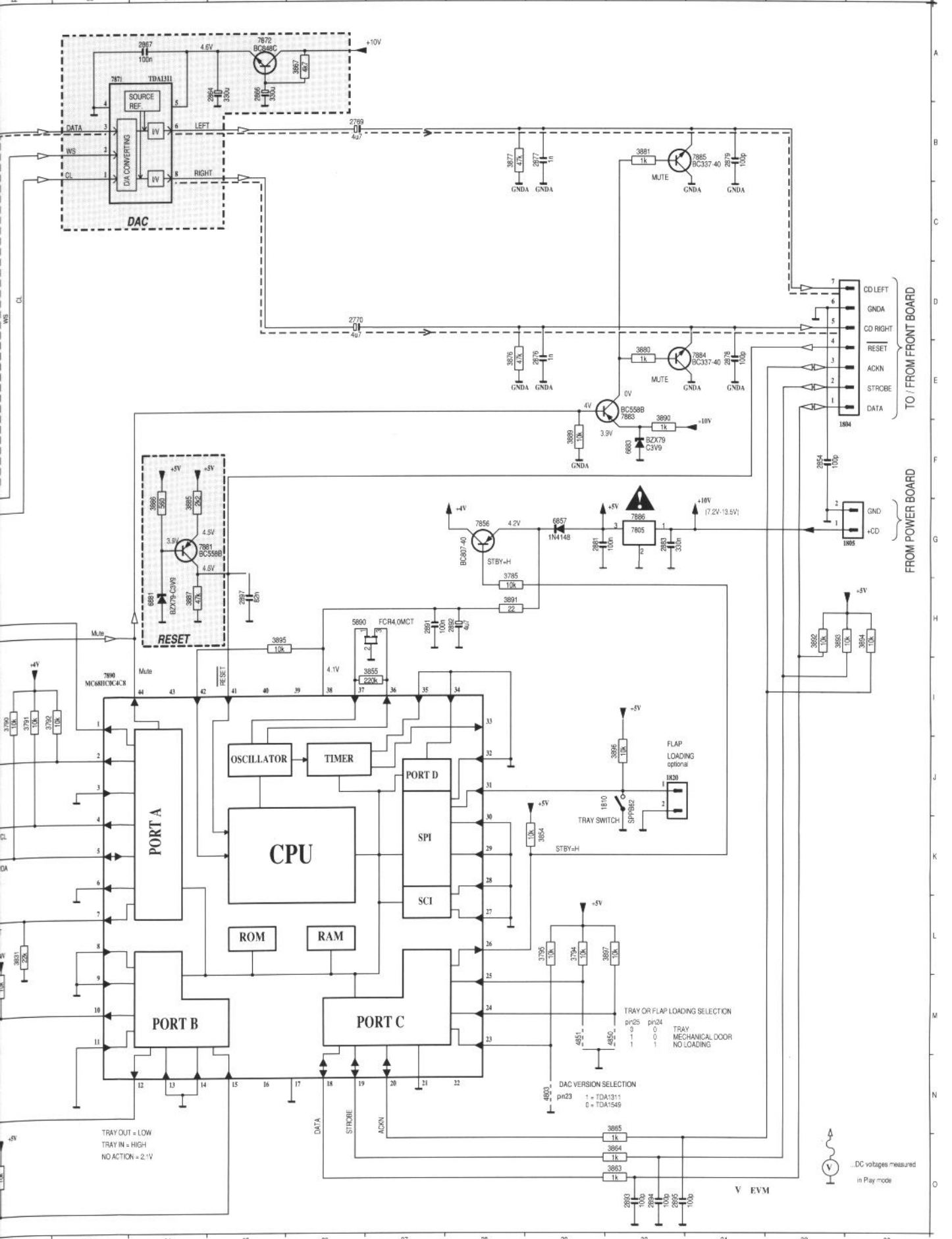


H10	2834	J10	2839	L13	2848	A16	2852	G18	2857	E16	2861	G17	2867	A24	2879	B31	2889	A14	2893	O30	3750	E16
H10	2836	K13	2840	L12	2849	M16	2853	O13	2858	E16	2862	G17	2876	E29	2881	G29	2890	B14	2894	O30	3751	C20
H14	2837	K12	2843	M12	2850	J14	2854	F32	2859	F16	2864	A25	2877	B29	2883	G30	2891	H27	2895	O30	3752	C20
J10	2838	H14	2847	L10	2851	O12	2856	D16	2860	F16	2866	A25	2878	E31	2888	B12	2892	H28	2897	H25	3754	G13



TRAY OUT = LOW
 TRAY IN = HIGH
 NO ACTION = 2.1V

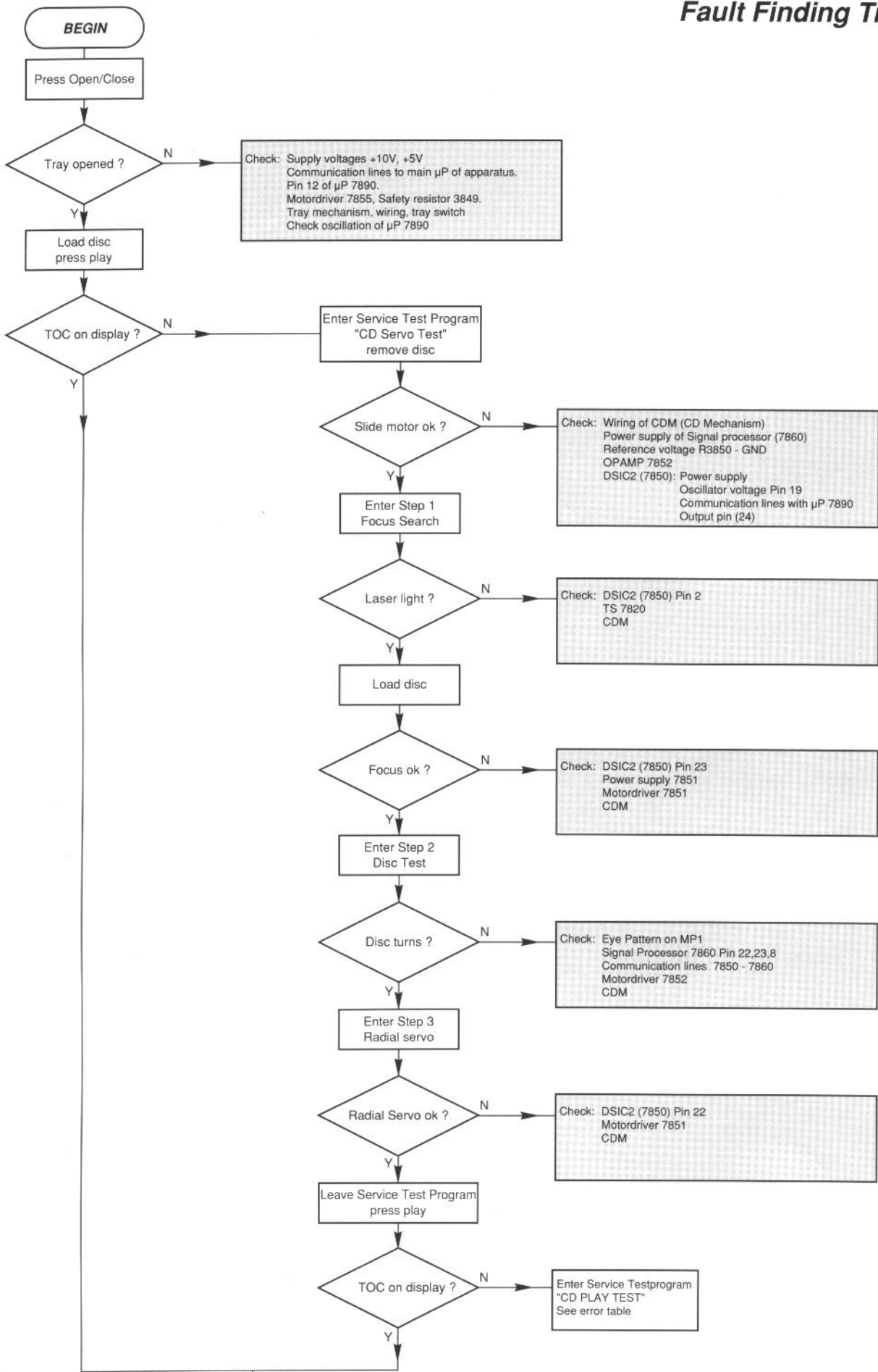
14	2893	O30	3750	E16	3755	H13	3763	F19	3785	H28	3792	I22	3801	A8	3805	C7	3809	D8	3813	D10	3820	H4
14	2894	O30	3751	C20	3760	N20	3764	F19	3786	B14	3793	M22	3802	D4	3806	B6	3810	C8	3814	C11	3821	H5
27	2895	O30	3752	C20	3761	O20	3767	A29	3790	I22	3794	L29	3803	C5	3807	B8	3811	C9	3815	D12	3822	G5
28	2897	H25	3754	G13	3762	F19	3770	D29	3791	I22	3795	L29	3804	D6	3808	C5	3812	D9	3818	F10	3823	E13

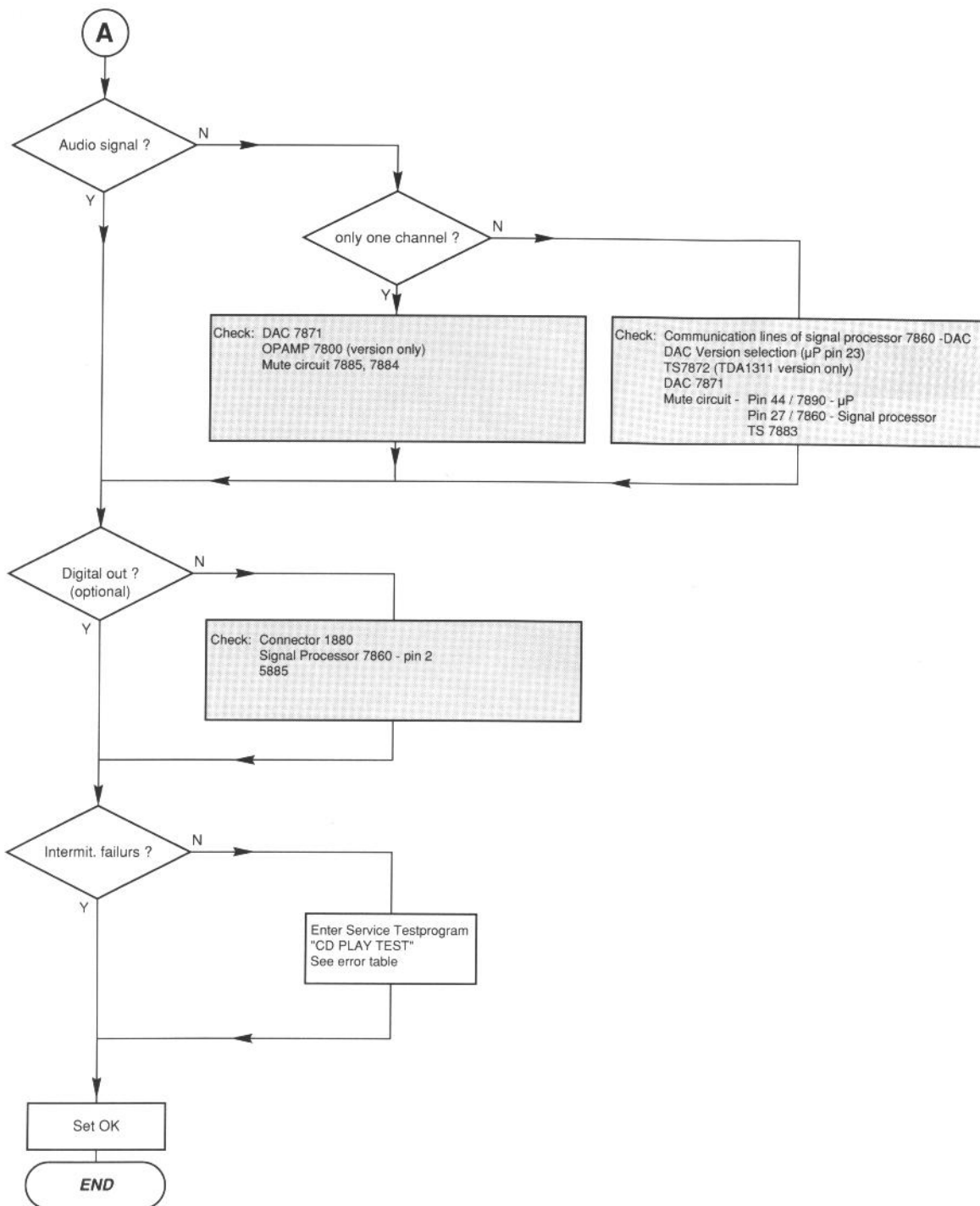


3824	H5
3825	G8
3826	G8
3827	G9
3828	G9
3829	F10
3830	F10
3831	L22
3832	I10
3833	H11
3834	E14
3835	K13
3836	K13
3837	K12
3838	L13
3839	L13
3840	L12
3841	N21
3842	N21
3843	M13
3844	N12
3845	N13
3846	N13
3847	K11
3848	I13
3849	L16
3850	J13
3851	N13
3852	O13
3853	N12
3854	K29
3855	I27
3856	D16
3857	J11
3858	J12
3860	F16
3862	F17
3863	O30
3864	O30
3865	O30
3866	H13
3867	A26
3871	A16
3876	E28
3877	B28
3880	E30
3881	B30
3884	A15
3885	G24
3886	G24
3887	H24
3888	A12
3889	F29
3890	F30
3891	H28
3892	H32
3893	H32
3894	H33
3895	H25
3896	J30
3897	L30
3899	O22
4803	N29
4850	M30
4851	M29
5860	F17
5885	A13
5890	H26
6857	G29
6881	H24
6883	F30
7800	D5
7800	B7
7800	B6
7800	C10
7800	C8
7800	C7
7820	E10
7850	E11
7851	J9
7852	M9
7855	N20
7856	G28
7860	B20
7871	A23
7872	C24
7880	D27
7880	A27
7881	G24
7883	C30
7884	E31
7885	B31
7886	G30
7890	I23

DC voltages measured in Play mode

Fault Finding Tree CD





Abb

DSIC2

Pin N

1	R
2	L
3	G
4	V
5	D
6	D
7	D
8	V
9	D
10	R
11	R
12	V
13	
14	TS
15	TS
16	O
17	CR
18	XT
19	XT
20	VD
21	GR
22	TR
23	FO
24	SI
25	SI
26	SI
27	SI
28	VD

SIGNA

Pin N

1	CL
2	DC
3	V1
4	V2
5	Te
6	Te
7	ISL
8	HF
9	HF
10	IRE
11	VD
12	VS
13	CR
14	CR
15	VD
16	VS
17	CL
18	MIS
19	DA
20	WC
21	SC
22	MO
23	MO
24	V5
25	V4
26	V3
27	KIL
28	PO
29	CLA
30	DA
31	CL
32	RAF
33	CFI
43	VSS
44	VD