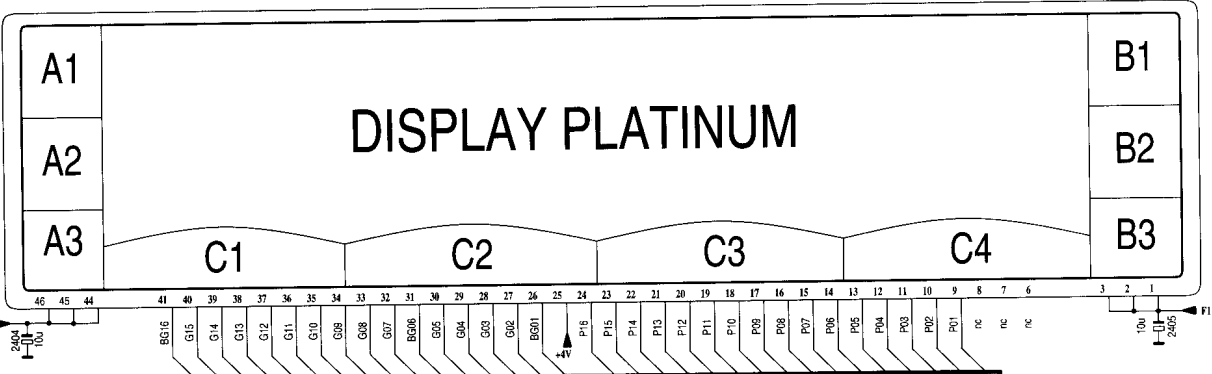
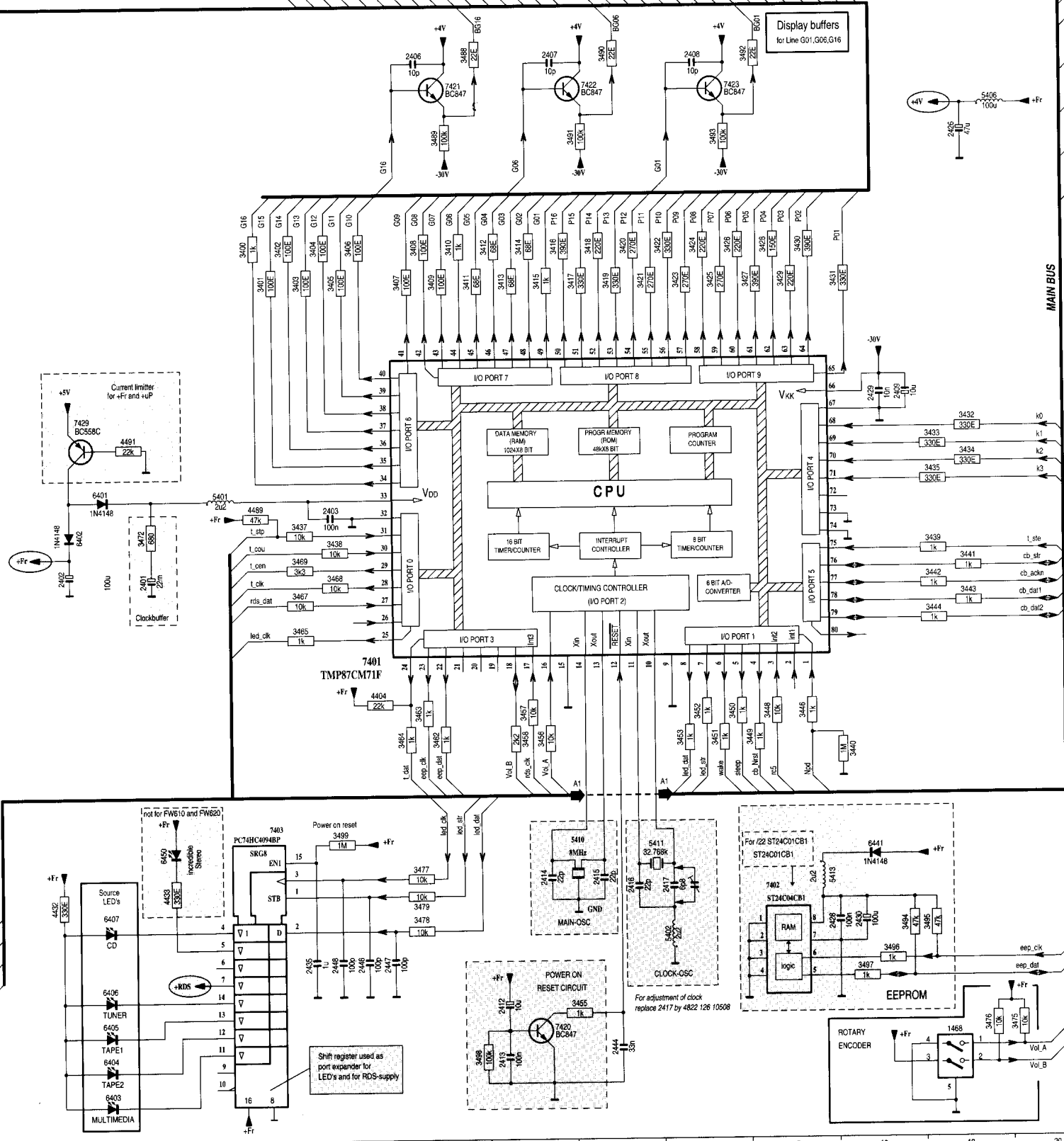


1400



DISPLAY & KEY MATRIX BUS

MAIN BUS

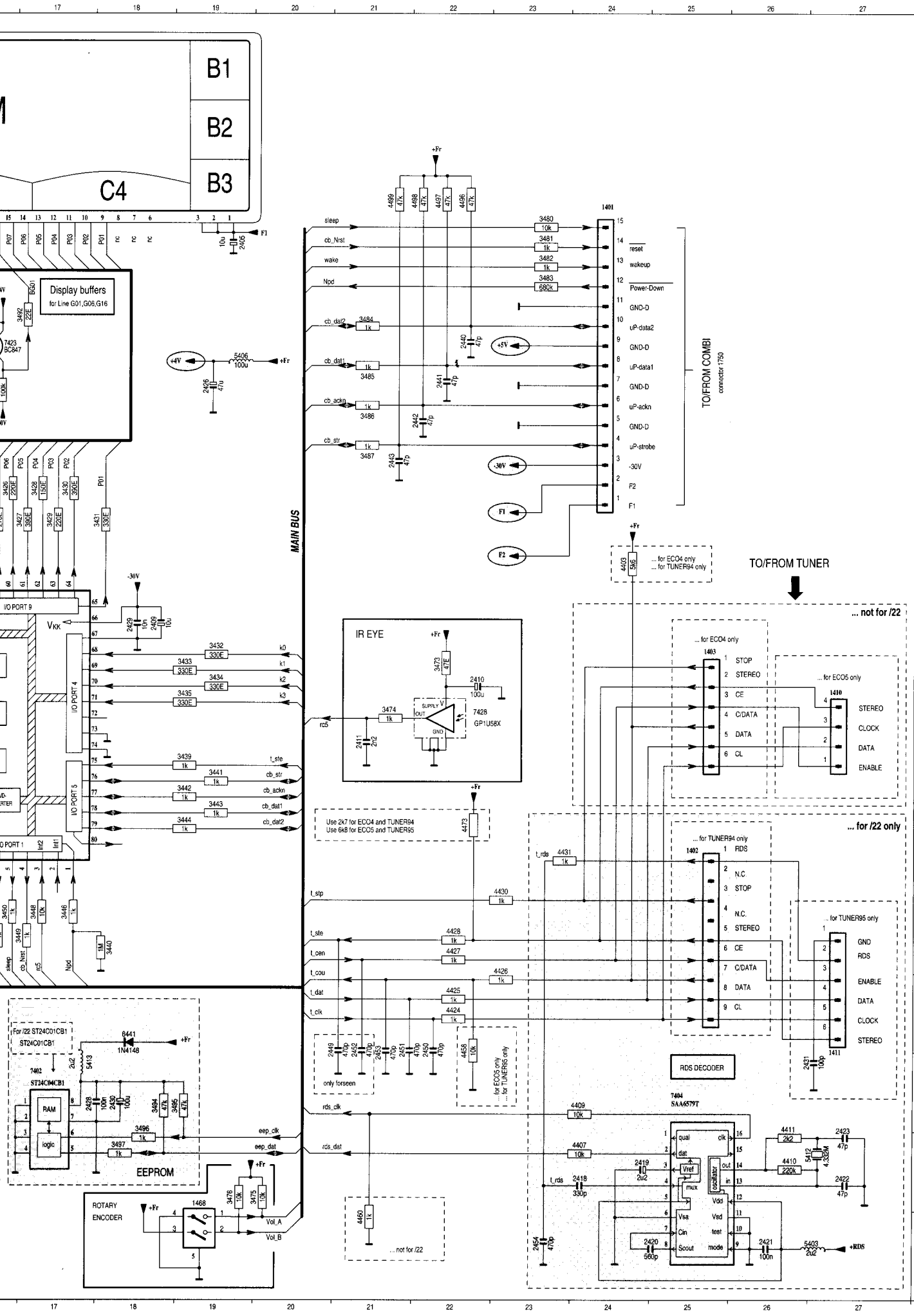


not for FW610 and FW620

For I22 ST2401CB1

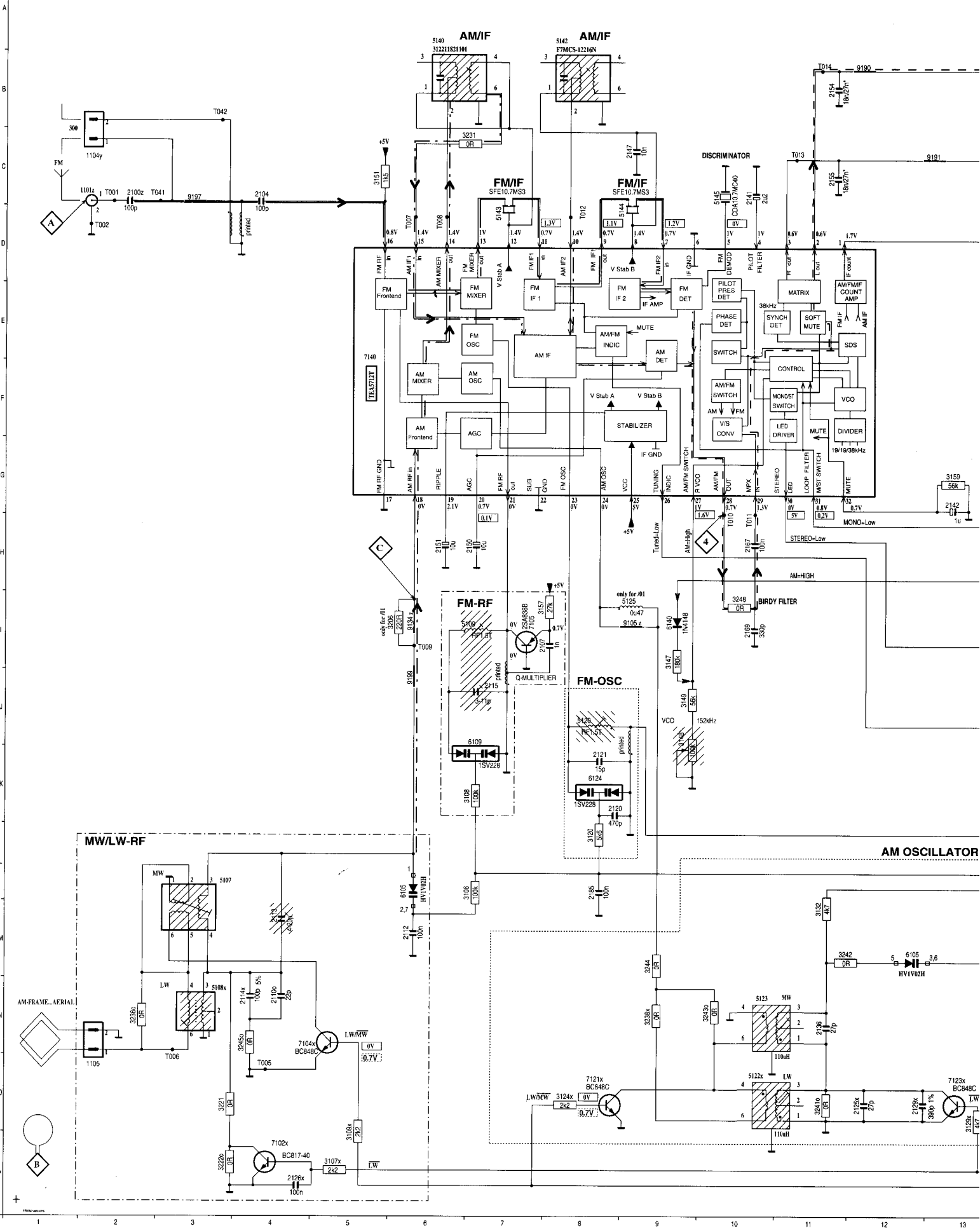
For adjustment of clock replace 2417 by 4822 126 10508

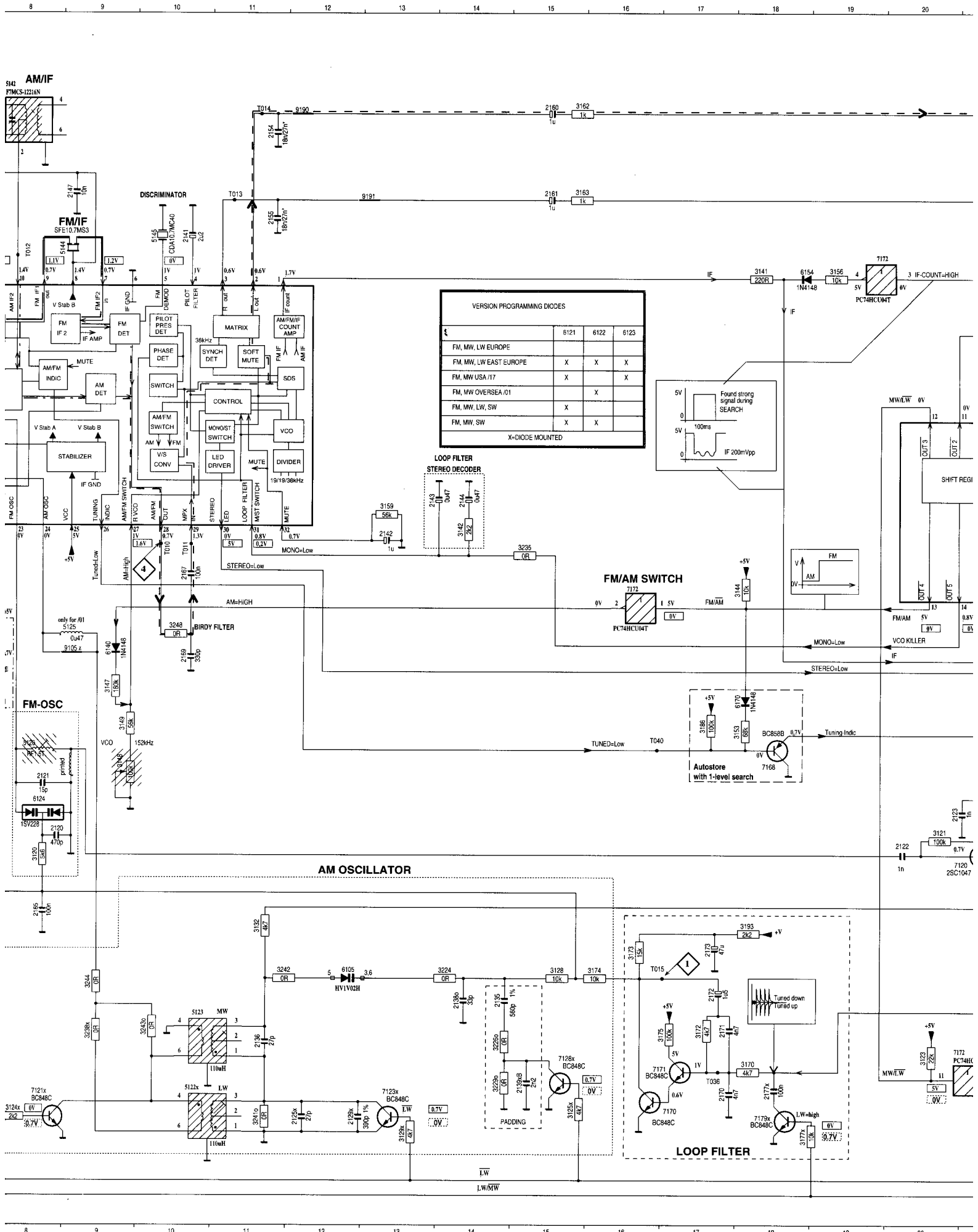
Shift register used as port expander for LED's and for RDS-supply

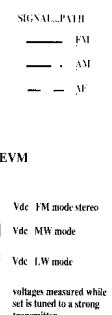
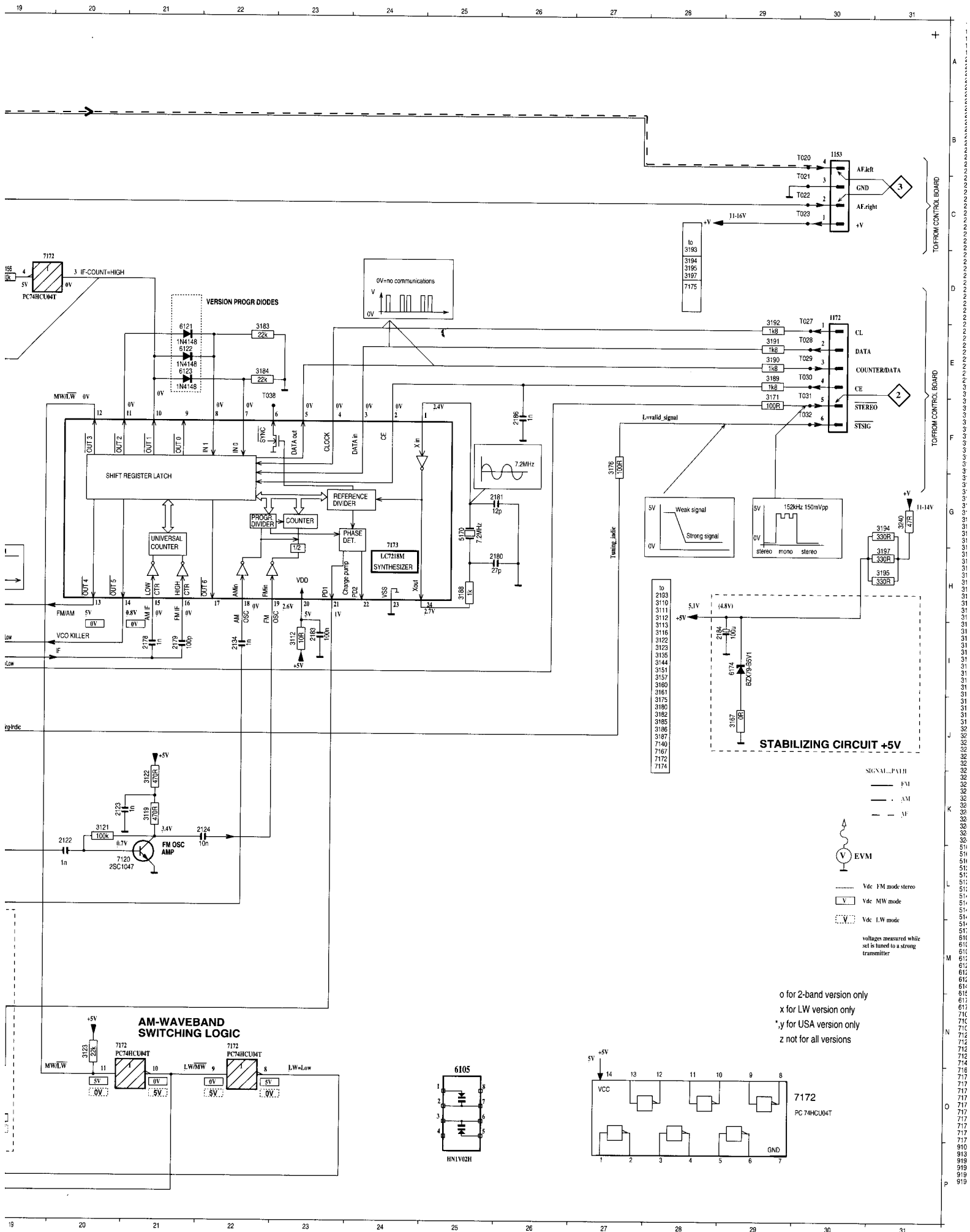


A	0004 L 1	3487 F21
	1400 A10	3488 D1:
	1401 C24	3489 E1:
	1402 G25	3490 D1:
	1403 H25	3491 E1:
	1404 M 3	3492 D1:
	1408 A 7	3493 E1:
	1409 A 5	3494 M1:
	1410 I27	3495 N1:
	1411 N27	3496 N1:
	1420 J 4	3497 O1:
	1421 J 5	3498 F1:
	1422 J 5	3499 M1:
	1423 F 5	3493 G2:
	1424 F 5	3494 L2:
	1425 F 4	3497 O2:
	1426 J 4	3499 N2:
	1427 J 5	3410 G2:
	1428 L 5	3411 N2:
	1429 F 5	3424 M2:
	1430 F 5	3425 M2:
	1431 F 4	3431 L2:
	1432 G 4	3427 L2:
	1433 G 5	3428 L2:
	1434 G 5	3430 K2:
	1435 H 5	3431 K2:
	1436 H 5	3432 N 9:
	1437 H 4	3433 N1:
	1438 H 4	3434 M1:
	1439 H 5	3435 B 5:
	1440 H 5	3442 J 7:
	1441 J 5	3443 F 7:
	1442 J 5	3444 L 7:
	1443 J 5	3445 G 7:
	1446 K 5	3446 G 7:
	1447 K 5	3447 M 7:
	1448 K 4	3448 J 7:
	1468 O19	3449 J 7:
	1497 L 3	3450 L 7:
	1499 L 1	3451 B 3:
	2401 J10	3452 M 3:
	2402 J 9	3456 K 7:
	2403 P12	3458 M2:
	2404 C10	3460 P2:
	2405 C19	3470 O 4:
	2406 D13	3471 O 5:
	2407 D14	3472 O 6:
	2408 D16	3473 K2:
	2409 H18	3488 J11:
	2410 J22	3489 J19:
	2411 J21	3488 P2:
	2412 O14	3487 C22:
	2413 P14	3488 C22:
	2414 N14	3489 C21:
	2415 N15	3491 I10:
	2416 N15	3492 N16:
	2417 N16	3493 P27:
	2418 O24	3495 B 5:
	2419 O24	3496 E19:
	2420 P25	3494 P 9:
	2421 P26	3495 C 8:
	2422 O27	3496 O 8:
	2423 O27	3497 N 7:
	2424 B 6	3498 J 7:
	2425 B 6	3499 F 7:
	2426 E19	3493 P 9:
	2428 N17	3494 P 9:
	2429 H18	3495 C 8:
	2430 N18	3496 O 8:
	2431 N27	3497 N 7:
	2435 O11	3498 J 7:
	2440 E22	3499 F 7:
	2441 E22	3498 J 7:
	2442 F22	3499 F 7:
	2443 F21	3498 J 7:
	2444 P15	3499 F 7:
	2445 N16	3498 J 7:
	2446 O12	3499 F 7:
	2447 O12	3499 F 7:
	2448 O12	3499 F 7:
	2449 M21	3499 F 7:
	2450 M22	3499 F 7:
	2451 M21	3499 F 7:
	2452 M21	3499 F 7:
	2453 M21	3499 F 7:
	2454 P23	3499 F 7:
	3400 F11	3499 F 7:
	3401 G11	3499 F 7:
	3402 F11	3499 F 7:
	3403 G11	3499 F 7:
	3404 F12	3499 F 7:
	3405 G12	3499 F 7:
	3406 F12	3499 F 7:
	3407 F13	3499 F 7:
	3408 F13	3499 F 7:
	3409 G13	3499 F 7:
	3410 F13	3499 F 7:
	3411 G13	3499 F 7:
	3412 F14	3499 F 7:
	3413 G14	3499 F 7:
	3414 F14	3499 F 7:
	3415 G14	3499 F 7:
	3416 F14	3499 F 7:
	3417 G15	3499 F 7:
	3418 F15	3499 F 7:
	3419 G15	3499 F 7:
	3420 F15	3499 F 7:
	3421 G15	3499 F 7:
	3422 F16	3499 F 7:
	3423 G16	3499 F 7:
	3424 F16	3499 F 7:
	3425 G16	3499 F 7:
	3426 F16	3499 F 7:
	3427 G17	3499 F 7:
	3428 F17	3499 F 7:
	3429 G17	3499 F 7:
	3430 F17	3499 F 7:
	3431 G18	3499 F 7:
	3432 H19	3499 F 7:
	3433 I19	3499 F 7:
	3434 I19	3499 F 7:
	3435 J19	3499 F 7:
	3436 J12	3499 F 7:
	3437 J11	3499 F 7:
	3438 J18	3499 F 7:
	3439 J18	3499 F 7:
	3440 L18	3499 F 7:
	3441 J19	3499 F 7:
	3442 J19	3499 F 7:
	3443 J15	3499 F 7:
	3444 K19	3499 F 7:
	3445 L18	3499 F 7:
	3446 L17	3499 F 7:
	3447 L17	3499 F 7:
	3448 L16	3499 F 7:
	3449 L16	3499 F 7:
	3450 L16	3499 F 7:
	3451 L16	3499 F 7:
	3452 L16	3499 F 7:
	3453 L16	3499 F 7:
	3454 L14	3499 F 7:
	3455 L14	3499 F 7:
	3456 L13	3499 F 7:
	3457 L13	3499 F 7:
	3458 L13	3499 F 7:
	3459 L13	3499 F 7:
	3460 L11	3499 F 7:
	3461 J11	3499 F 7:
	3462 J12	3499 F 7:
	3463 J11	3499 F 7:
	3464 J11	3499 F 7:
	3465 J10	3499 F 7:
	3466 J12	3499 F 7:
	3467 J10	3499 F 7:
	3468 J12	3499 F 7:
	3469 J12	3499 F 7:
	3470 J12	3499 F 7:
	3471 N13	3499 F 7:
	3472 N13	3499 F 7:
	3473 N13	3499 F 7:
	3474 N13	3499 F 7:
	3475 N13	3499 F 7:
	3476 O19	3499 F 7:
	3477 N13	3499 F 7:
	3478 N13	3499 F 7:
	3479 N13	3499 F 7:
	3480 C23	3499 F 7:
	3481 C23	3499 F 7:
	3482 C23	3499 F 7:
	3483 D23	3499 F 7:
	3484 D21	3499 F 7:
	3485 E21	3499 F 7:
	3486 E21	3499 F 7:

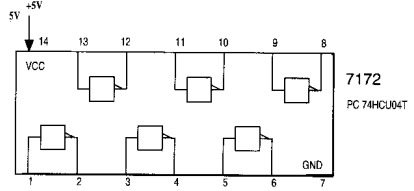
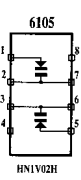
TUNER UNIT ECO4-VA (MINI)



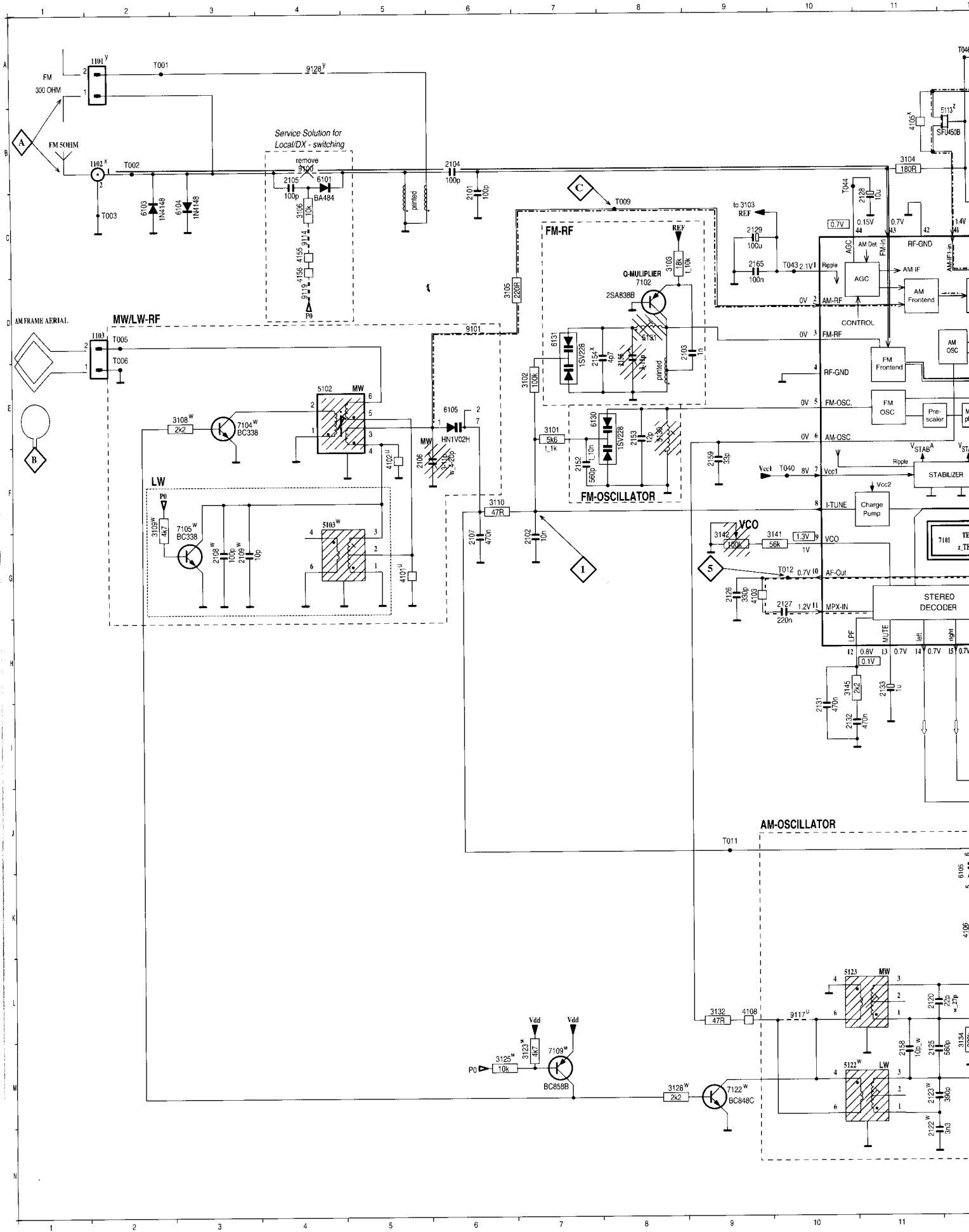


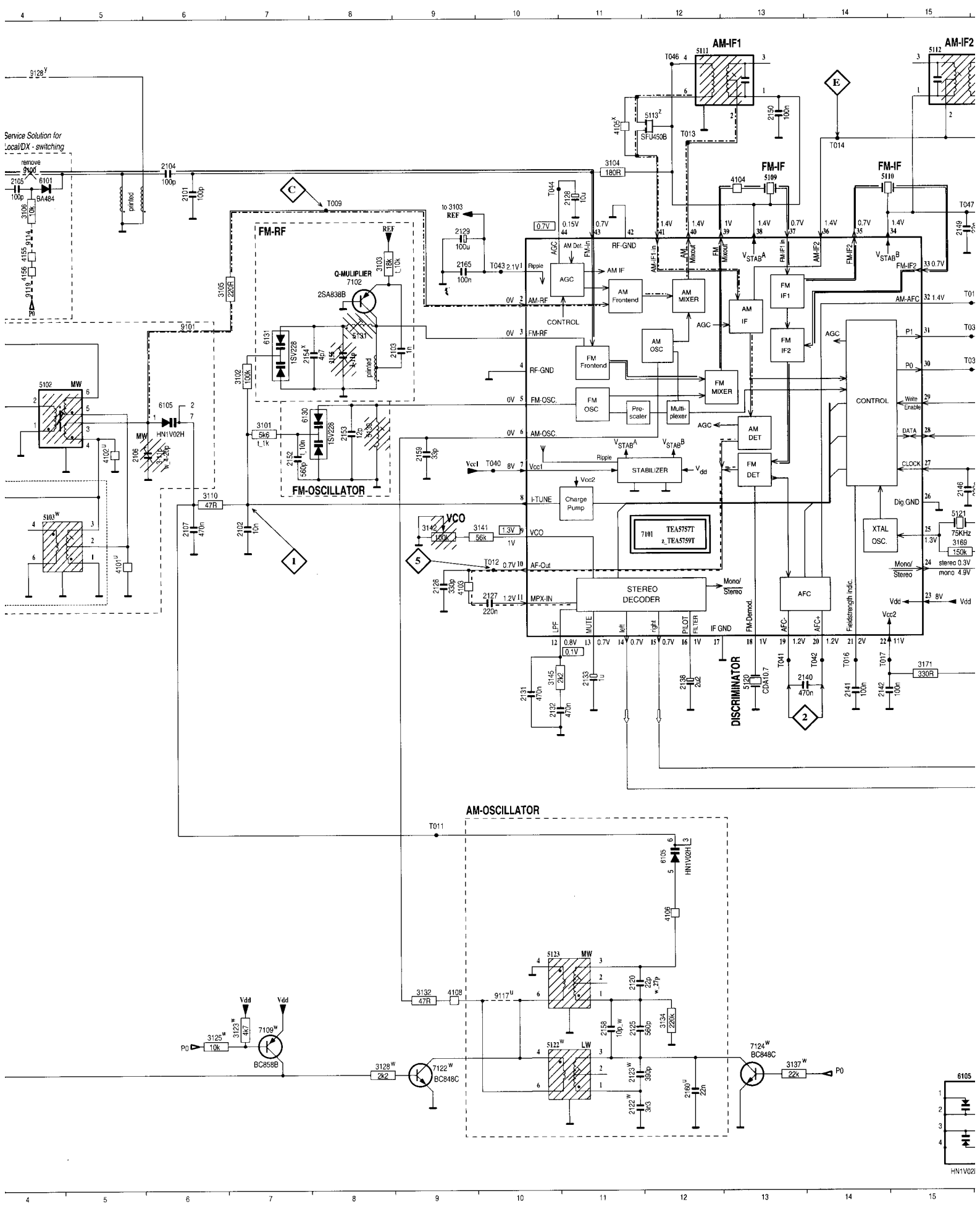


o for 2-band version only
 x for LW version only
 *y for USA version only
 z not for all versions

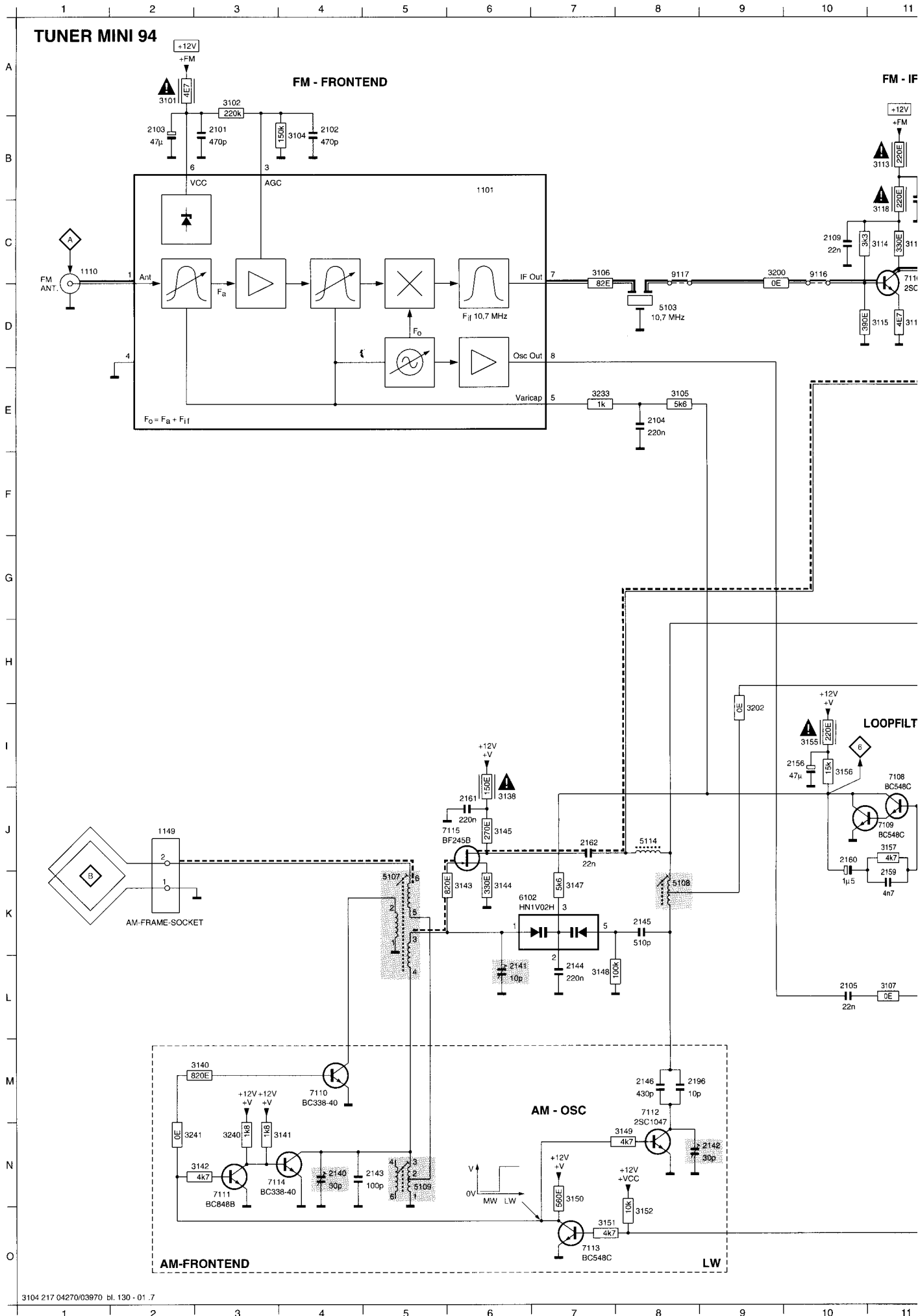


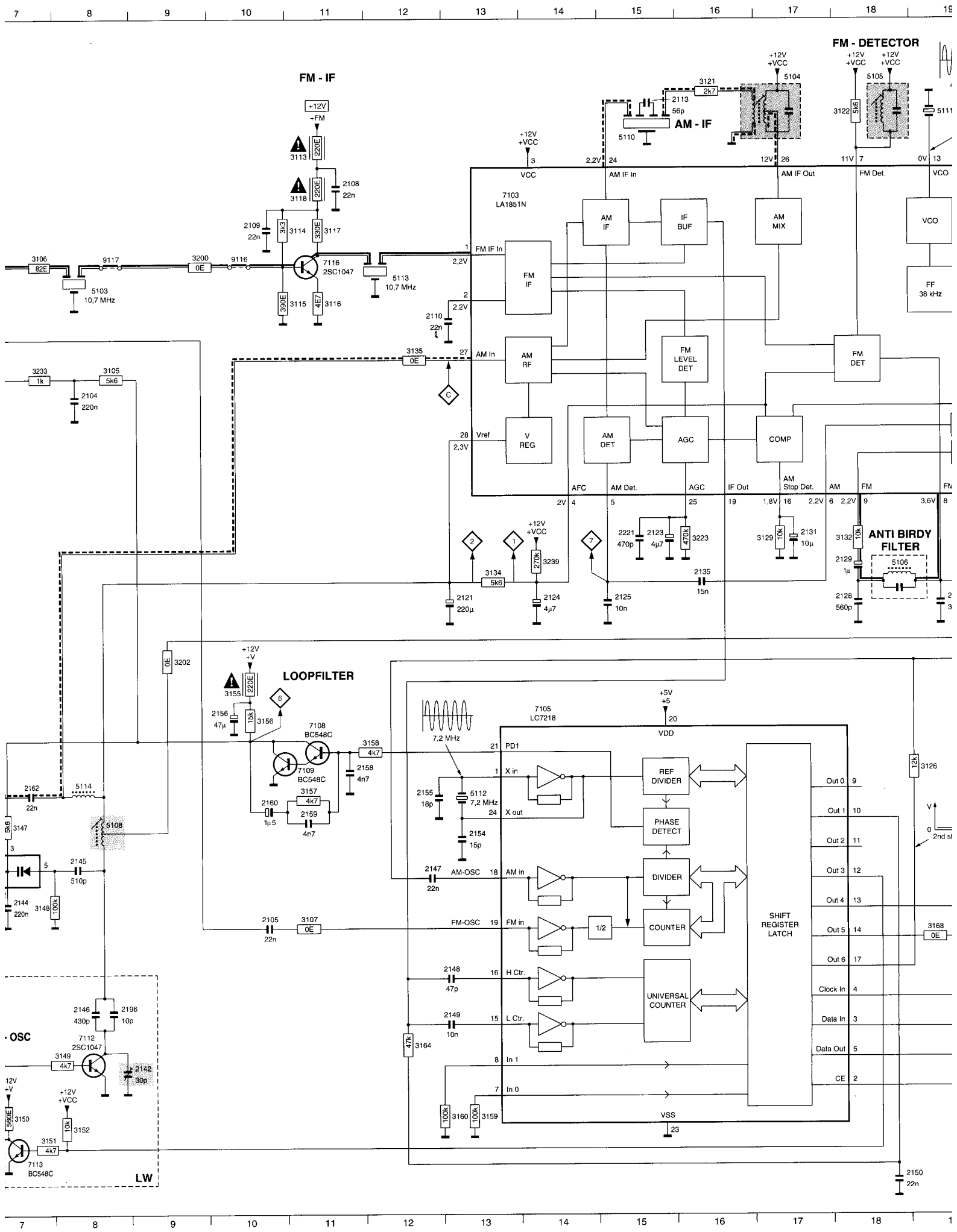
TUNER BOARD ECO5 / Systems



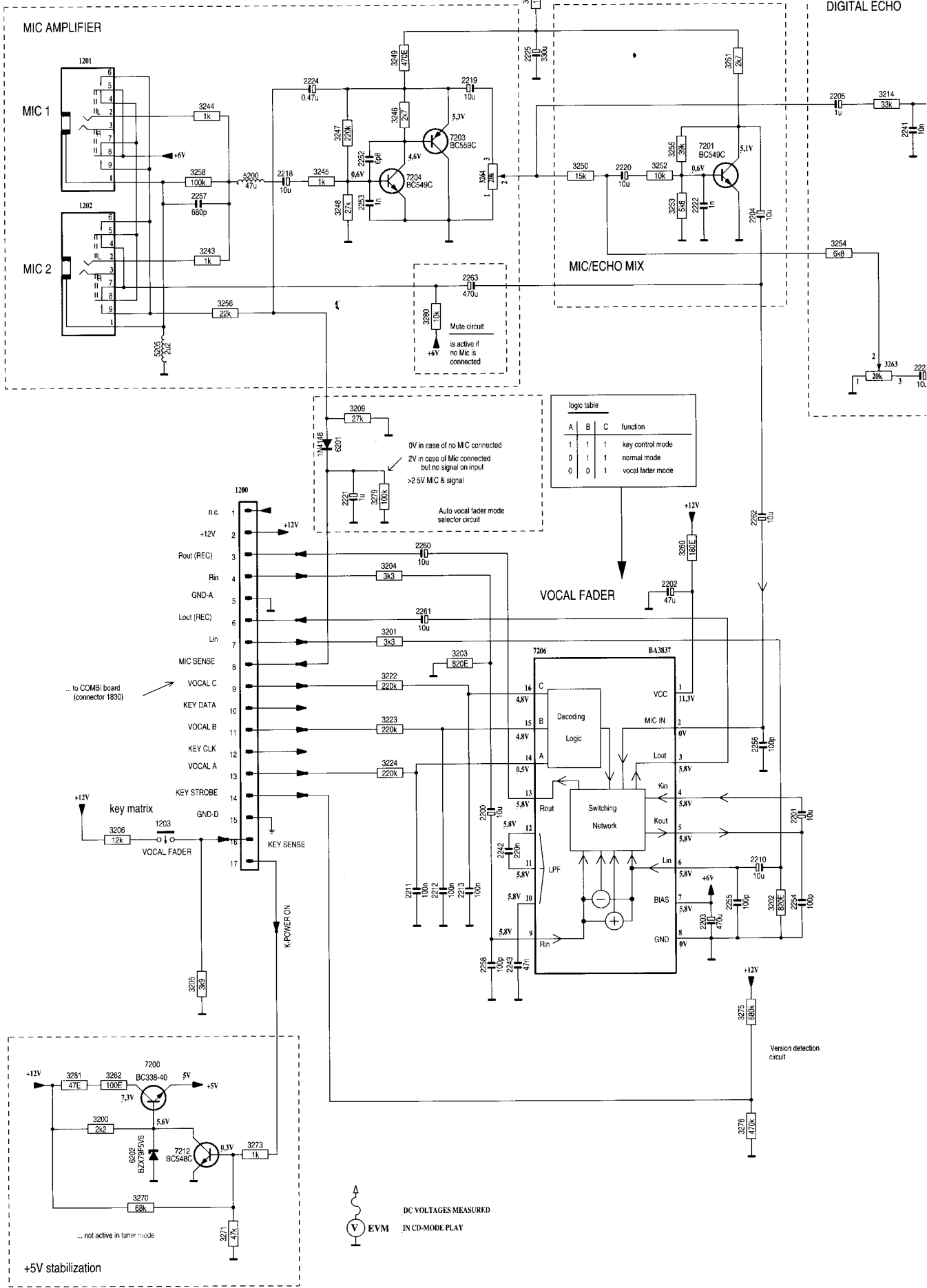


TUNER MINI 94





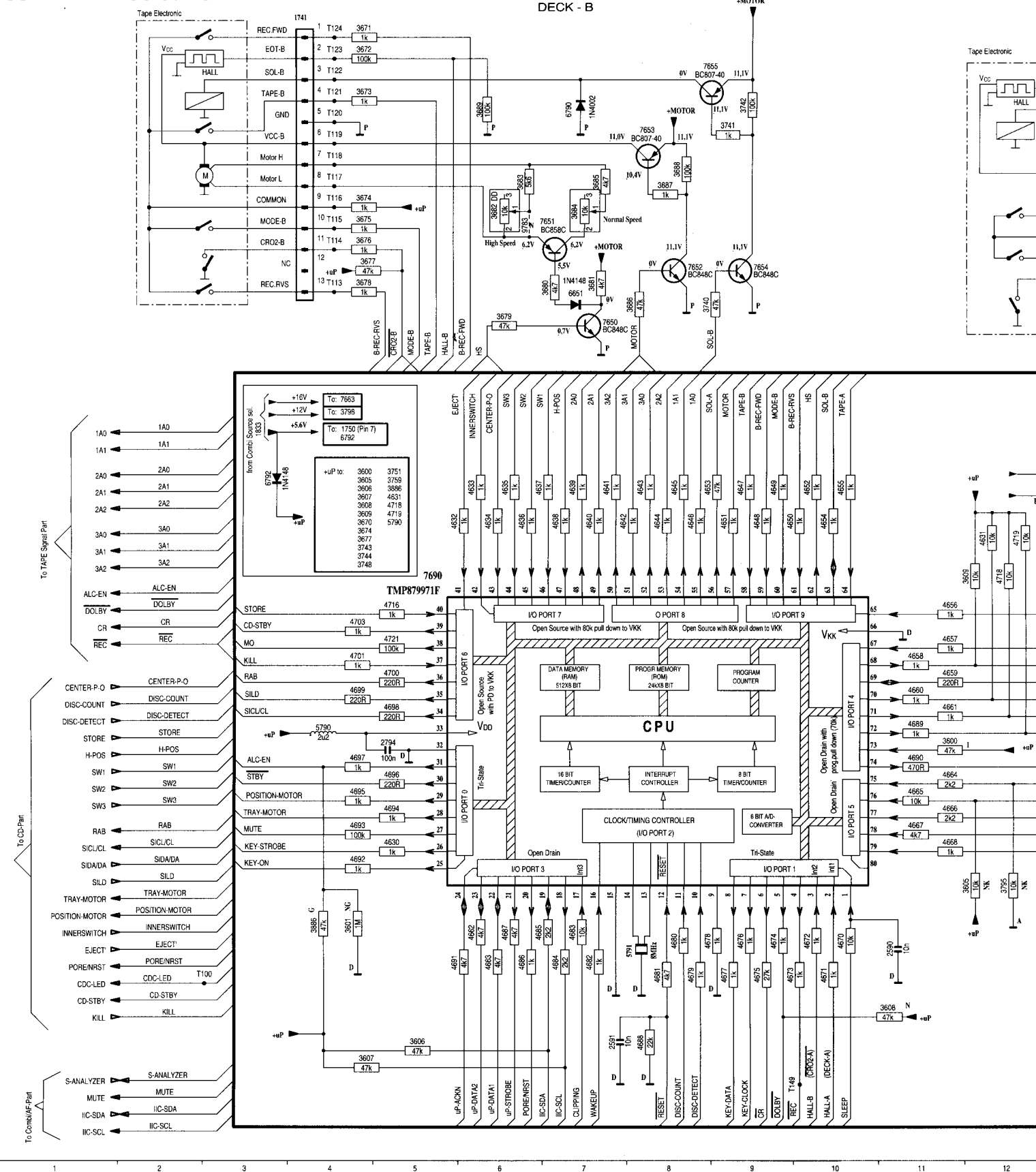
KARAOKE BOARD

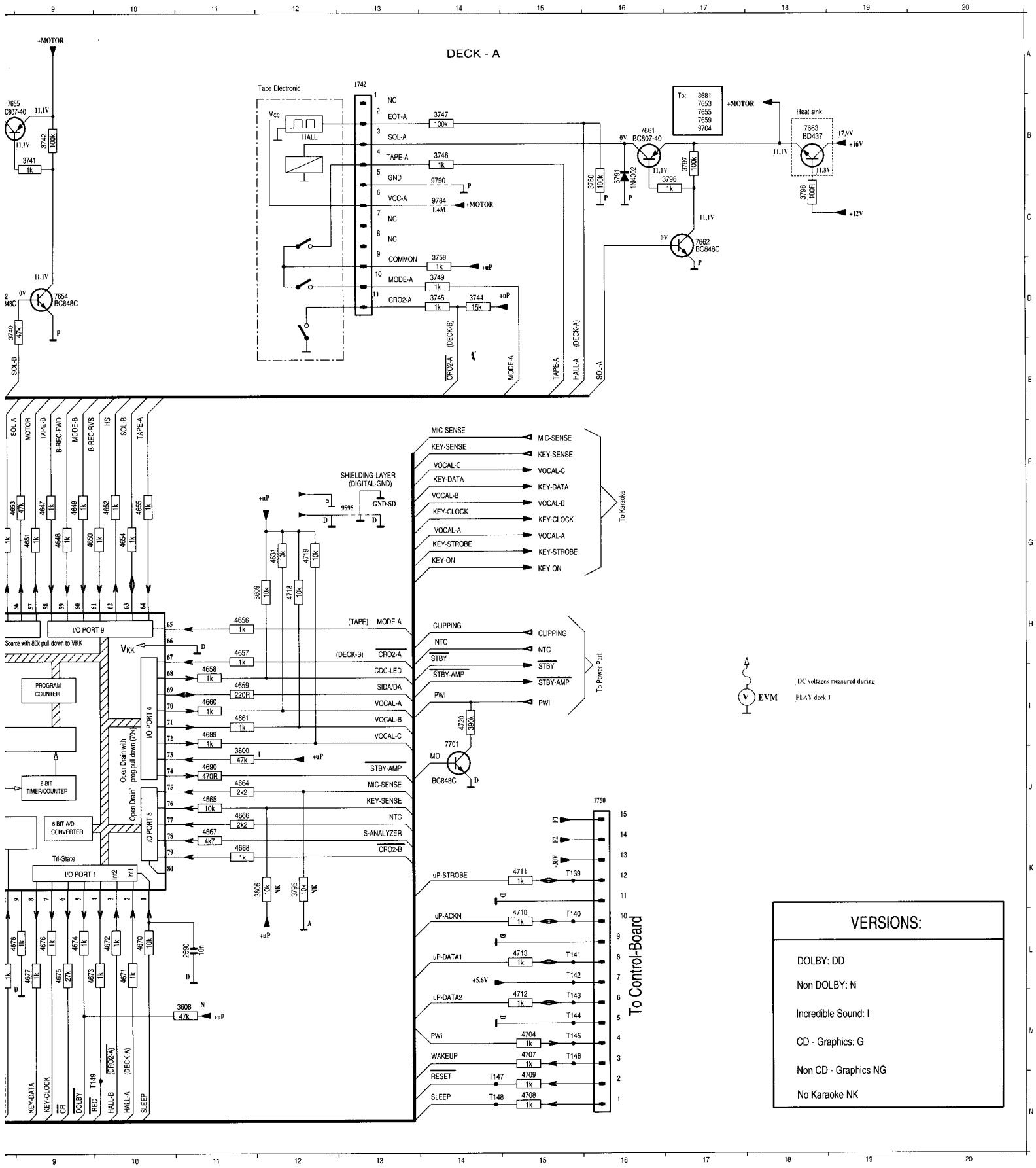


DC VOLTAGES MEASURED
 IN CD-MODE PLAY
 EVM

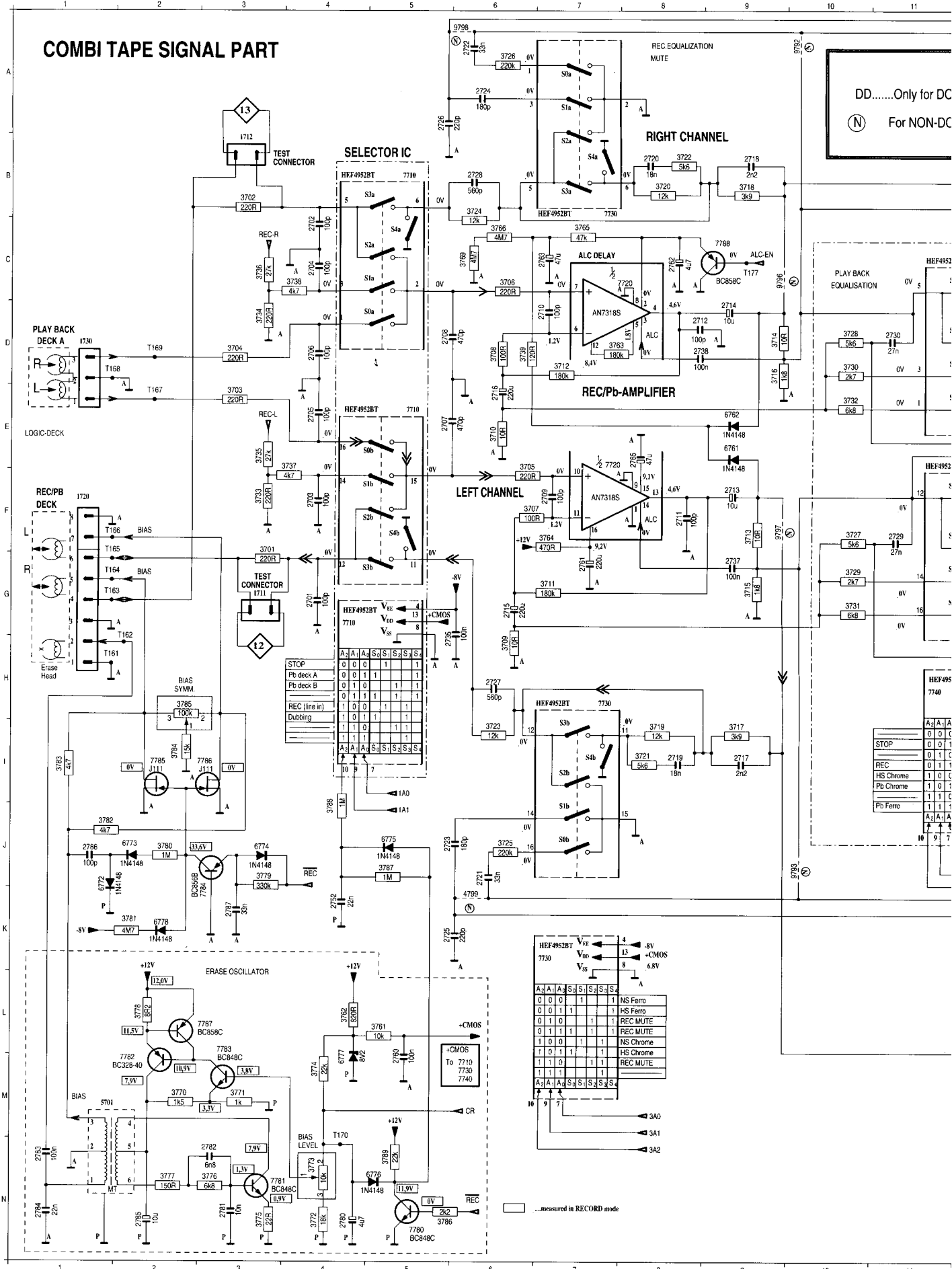
COMBI TAPE LOGIC / MUP PART

DECK - B





COMBI TAPE SIGNAL PART



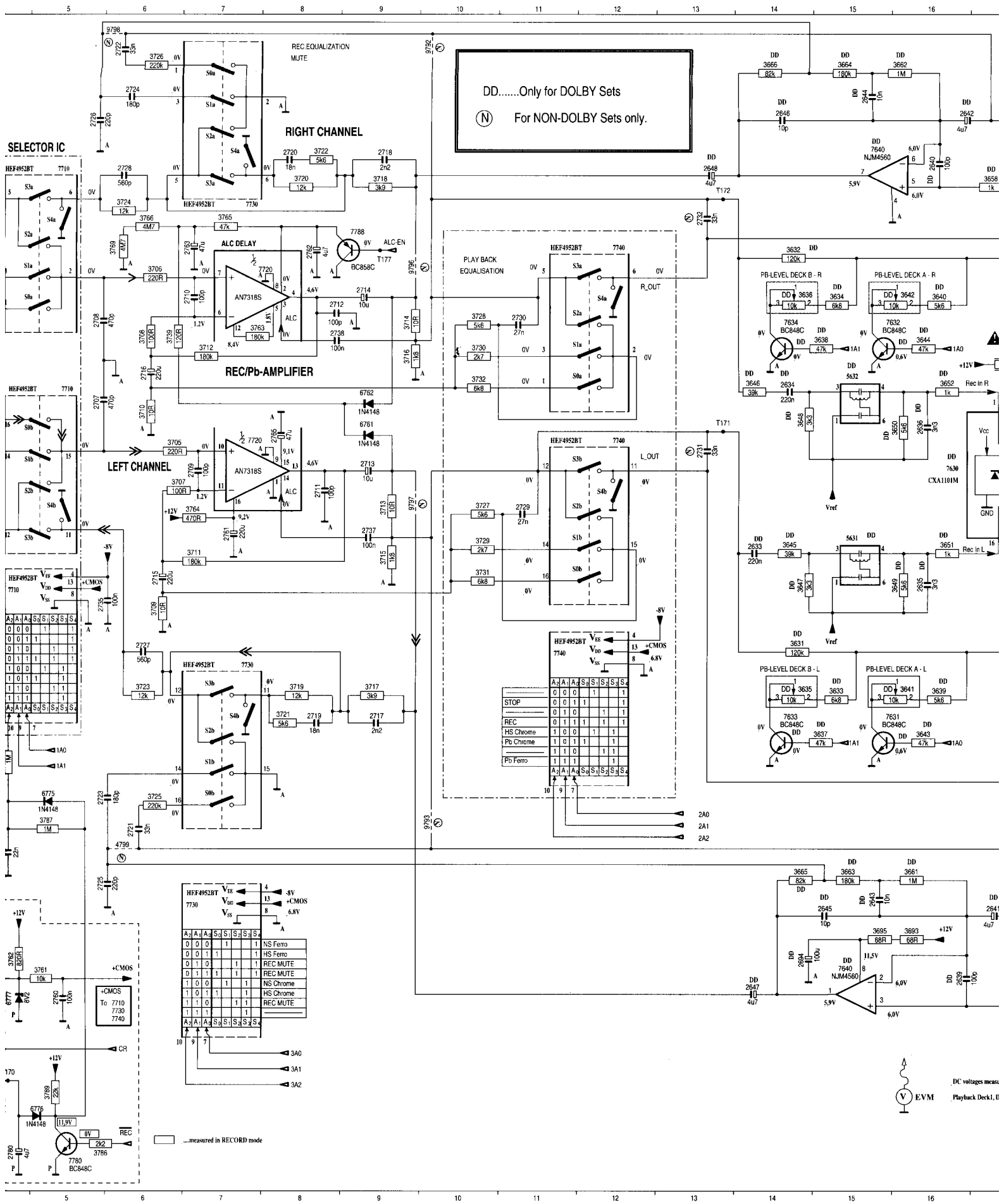
DD.....Only for DC
 (N) For NON-DC

	A ₁	A ₂	A ₃	A ₄	S ₁	S ₂	S ₃	S ₄	S ₅
STOP	0	0	0	0	1	1	1	1	1
Pb deck A	0	0	1	1	1	1	1	1	1
Pb deck B	0	1	0	1	1	1	1	1	1
REC (line in)	0	1	1	1	1	1	1	1	1
Dubbing	1	1	0	1	1	1	1	1	1

	A ₂	A ₁	A ₃	A ₄
STOP	0	0	1	1
Pb deck A	0	0	1	1
Pb deck B	0	1	0	1
REC	0	1	1	1
HS Chrome	1	0	1	1
Pb Chrome	1	0	1	1
Pb Ferro	1	1	1	1

	A ₂	A ₁	A ₃	A ₄	S ₁	S ₂	S ₃	S ₄	S ₅
NS Ferro	0	0	0	1	1	1	1	1	1
HS Ferro	0	0	1	1	1	1	1	1	1
REC MUTE	0	1	0	1	1	1	1	1	1
REC MUTE	1	0	1	1	1	1	1	1	1
NS Chrome	1	0	1	1	1	1	1	1	1
HS Chrome	1	1	0	1	1	1	1	1	1
REC MUTE	1	1	1	1	1	1	1	1	1

...measured in RECORD mode



A ₂	A ₁	A ₀	S ₄	S ₃	S ₂	S ₁	S ₀	Function
0	0	0	1	1	1	1	1	NS Ferro
0	0	1	1	1	1	1	1	HS Ferro
0	1	0	1	1	1	1	1	REC MUTE
0	1	1	1	1	1	1	1	REC MUTE
1	0	0	1	1	1	1	1	NS Chrome
1	0	1	1	1	1	1	1	HS Chrome
1	1	0	1	1	1	1	1	REC MUTE
1	1	1	1	1	1	1	1	REC MUTE

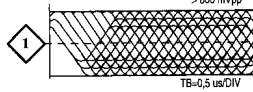
...measured in RECORD mode

DC voltages meas
Playback Deck 1, D



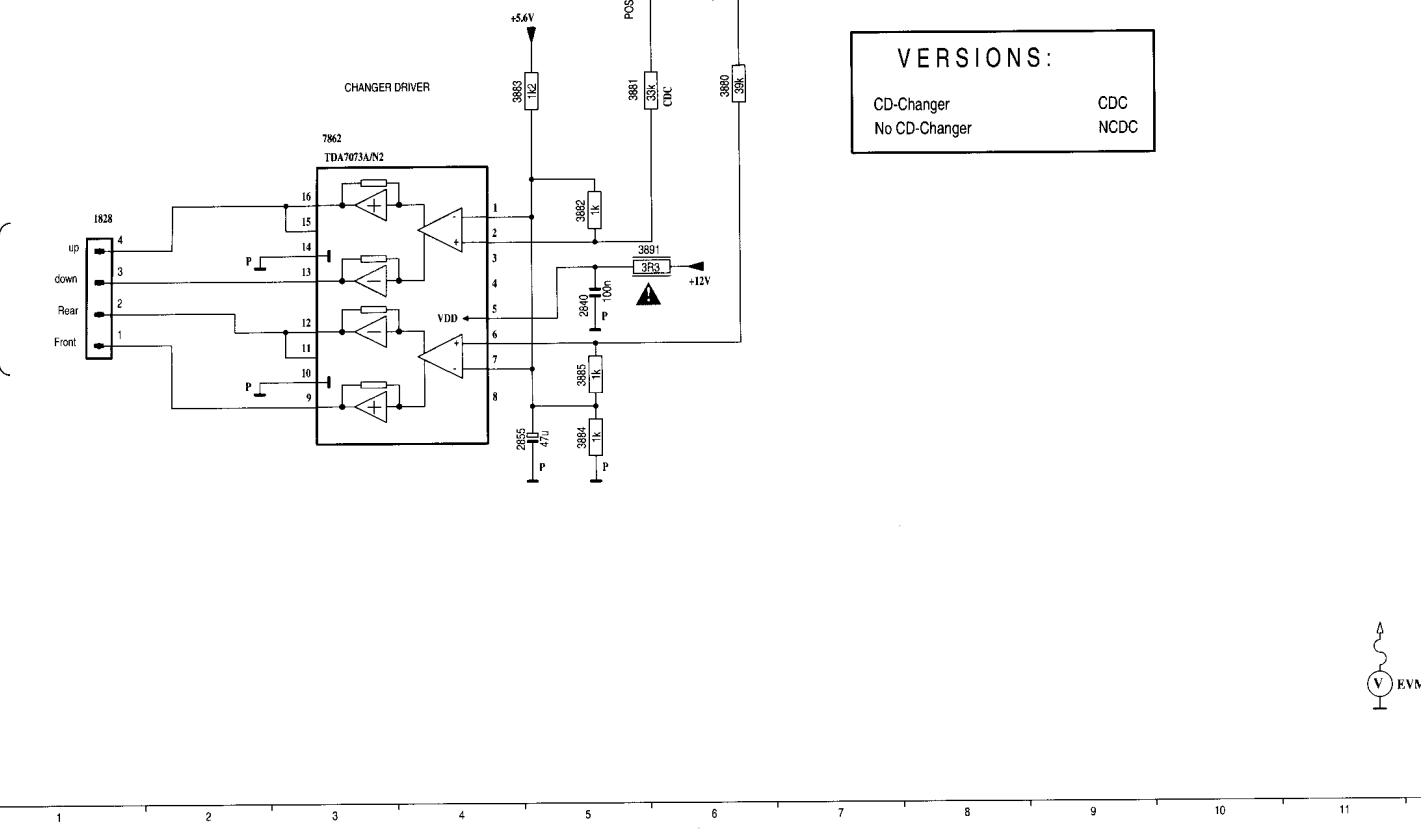
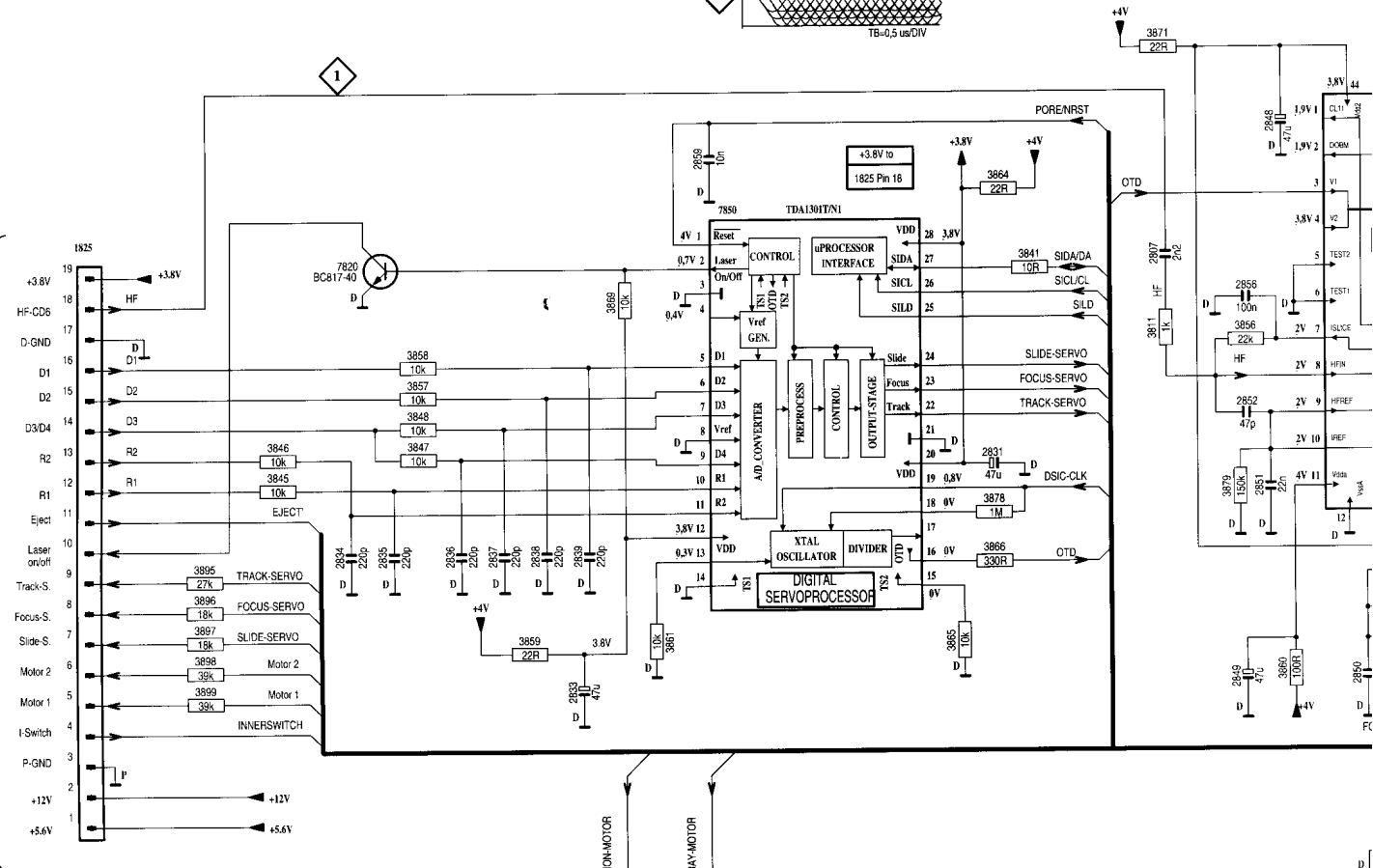
COMBI CD-PART

eye-pattern



TO / FROM CD(C) MODULE

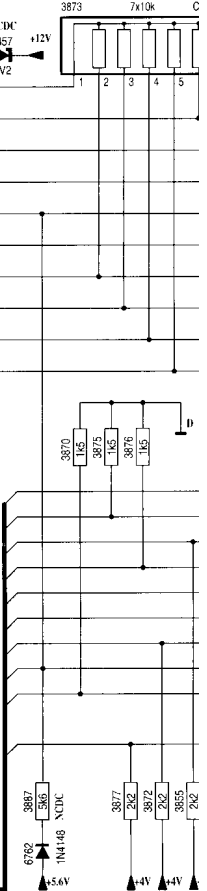
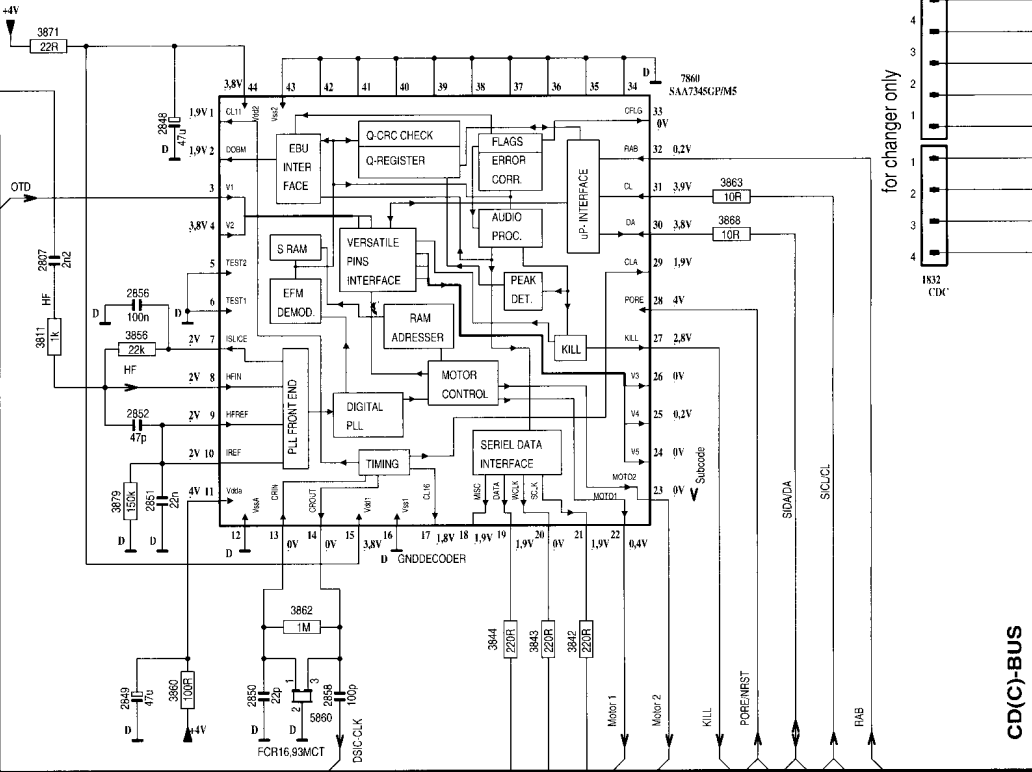
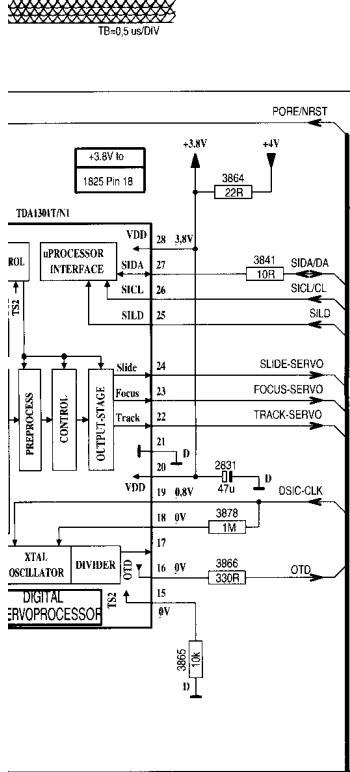
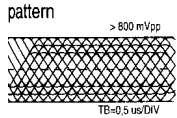
TO / FROM CD(C) MODULE



VERSIONS:
 CD-Changer CDC
 No CD-Changer NCDC

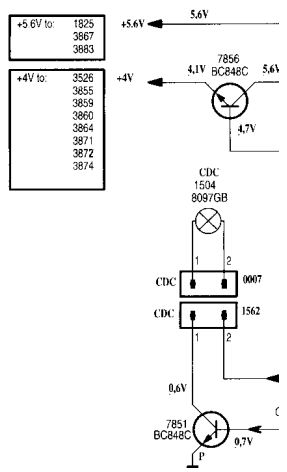
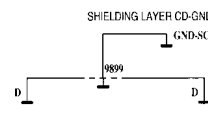


7 8 9 10 11 12 13 14 15 16 17 18 19

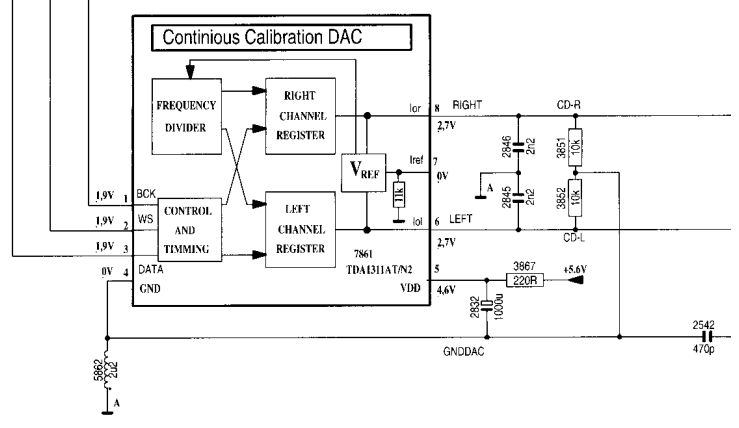


VERSIONS:

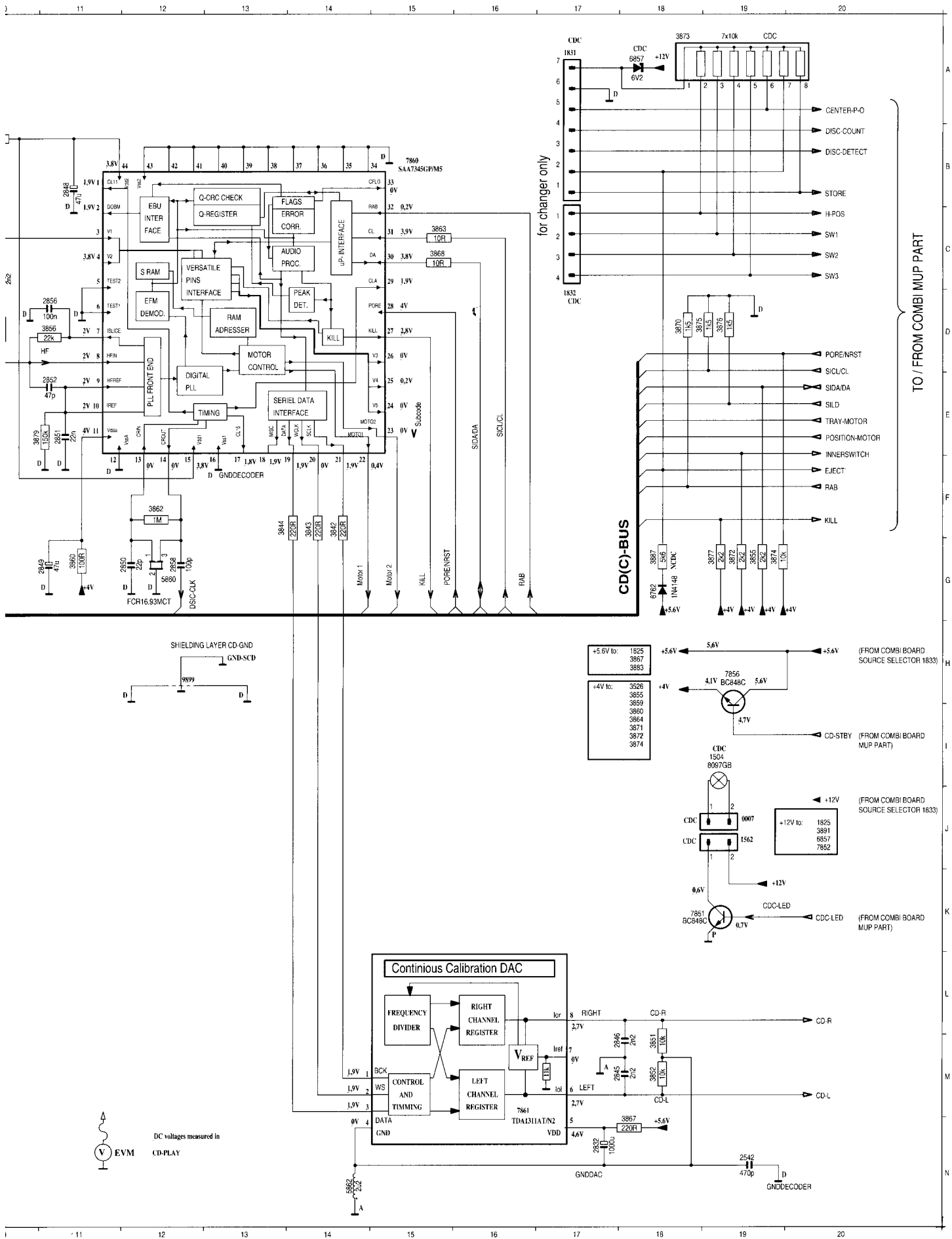
CD-Changer	CDC
No CD-Changer	NCDC



DC voltages measured in
CD-PLAY



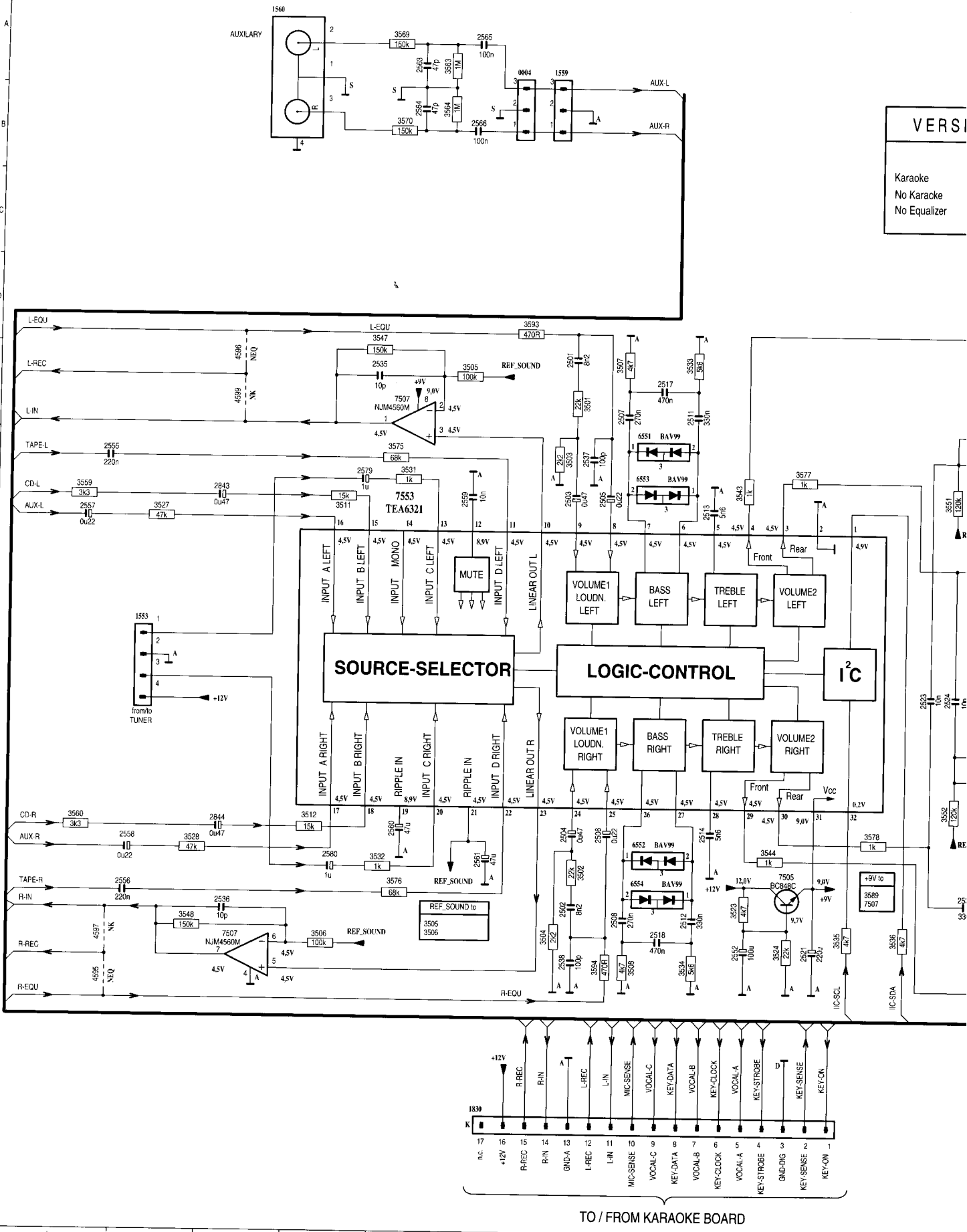
7 8 9 10 11 12 13 14 15 16 17 18 19



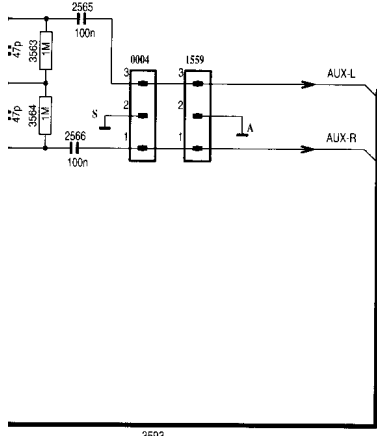
- 0007 J19
 - 1504 J19
 - 1562 J19
 - 1825 C 1
 - 1828 J 1
 - 1831 A17
 - 1832 D17
 - 2542 N19
 - 2807 C10
 - 2801 E 9
 - 2832 N17
 - 2833 G 5
 - 2834 F 3
 - 2835 F 4
 - 2836 F 4
 - 2837 F 4
 - 2838 F 5
 - 2839 F 5
 - 2840 K 5
 - 2845 M18
 - 2846 M18
 - 2848 B11
 - 2849 G11
 - 2850 G12
 - 2851 E11
 - 2852 E11
 - 2855 L 5
 - 2856 D11
 - 2858 J13
 - 2859 C 6
 - 3811 D10
 - 3841 C 9
 - 3842 F14
 - 3843 F14
 - 3844 F13
 - 3845 E 3
 - 3846 E 3
 - 3847 E 4
 - 3848 E 4
 - 3851 M18
 - 3852 M18
 - 3855 G19
 - 3858 D11
 - 3857 D 4
 - 3859 G 5
 - 3859 G 5
 - 3860 G11
 - 3861 G 6
 - 3862 F12
 - 3863 C15
 - 3864 G 9
 - 3865 G 9
 - 3866 F 9
 - 3867 N18
 - 3868 C15
 - 3869 G 5
 - 3870 D18
 - 3871 B10
 - 3872 G19
 - 3873 A18
 - 3874 G19
 - 3875 D18
 - 3876 D19
 - 3877 G19
 - 3878 E 9
 - 3879 F10
 - 3880 J 6
 - 3881 J 5
 - 3882 J 5
 - 3883 J 4
 - 3884 J 5
 - 3885 F 2
 - 3885 F 2
 - 3886 F 2
 - 3887 F 2
 - 3888 G 2
 - 3889 C 2
 - 5860 G12
 - 5862 N14
 - 6857 A18
 - 7820 C 3
 - 7850 C 6
 - 7851 K19
 - 7856 H19
 - 7860 B15
 - 7861 M16
 - 7862 J 3
- TO / FROM COMBI MUP PART
- PORENPRST
 - SICLCL
 - SIDAIDA
 - SILD
 - TRAY-MOTOR
 - POSITION-MOTOR
 - INNERSWITCH
 - EJECT
 - RAB
 - KILL
- CDC(C)-BUS
- +5.6V to: 1825, 3867, 3883
 - +4V to: 3526, 3855, 3859, 3860, 3864, 3871, 3872, 3874
 - +12V to: 1825, 3891, 6857, 7852
- GNDDECODER

COMBI AF-PART

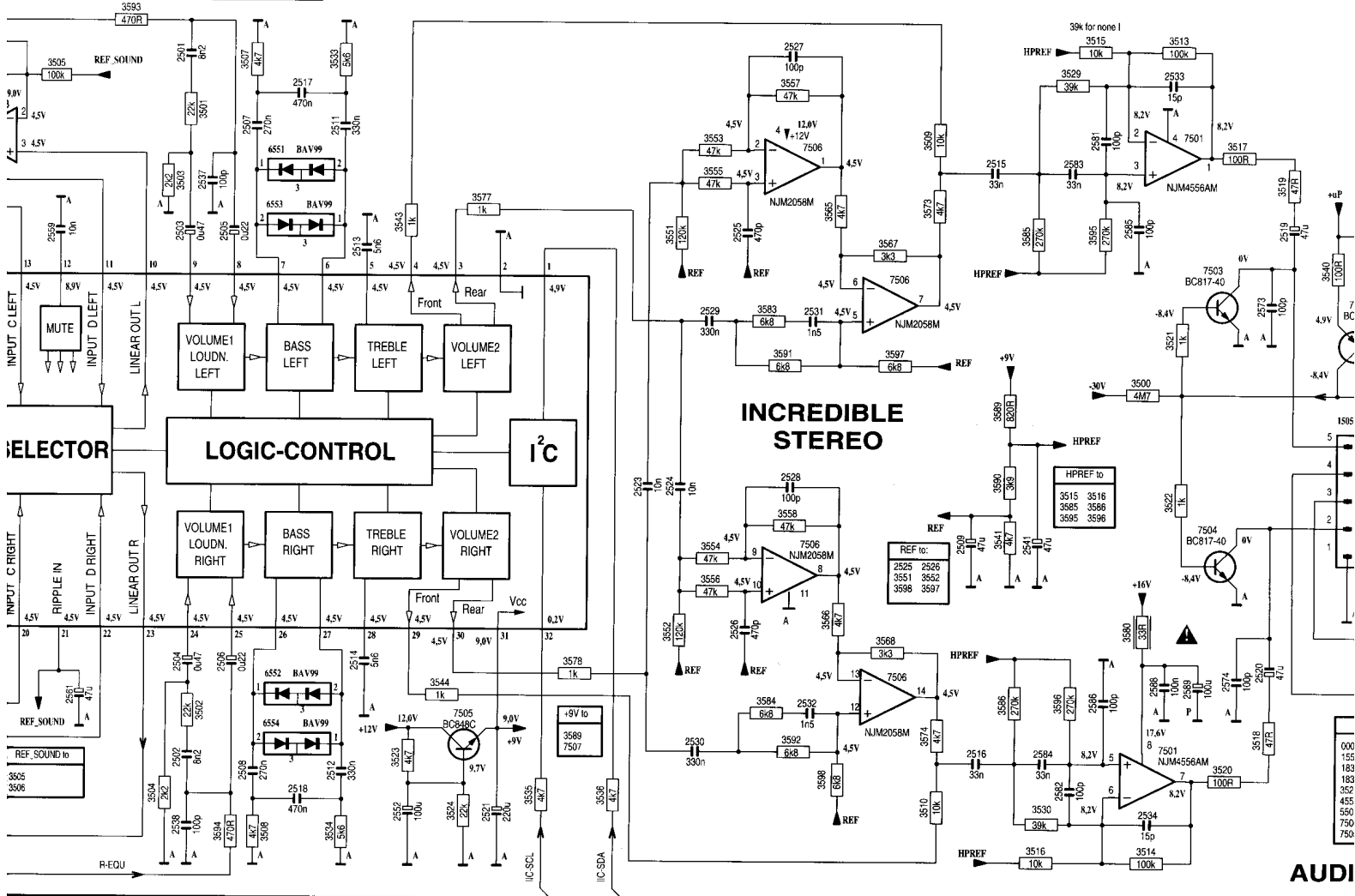
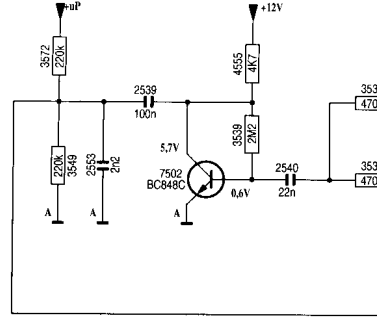
VERS I
Karaoke
No Karaoke
No Equalizer



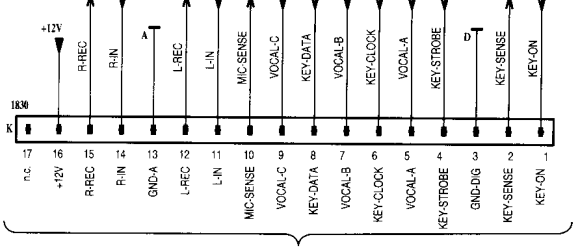
TO / FROM KARAOKE BOARD



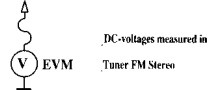
VERSIONS:	
Karaoke	K
No Karaoke	NK
No Equalizer	NEQ



AUDI



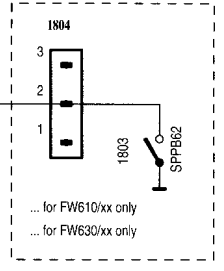
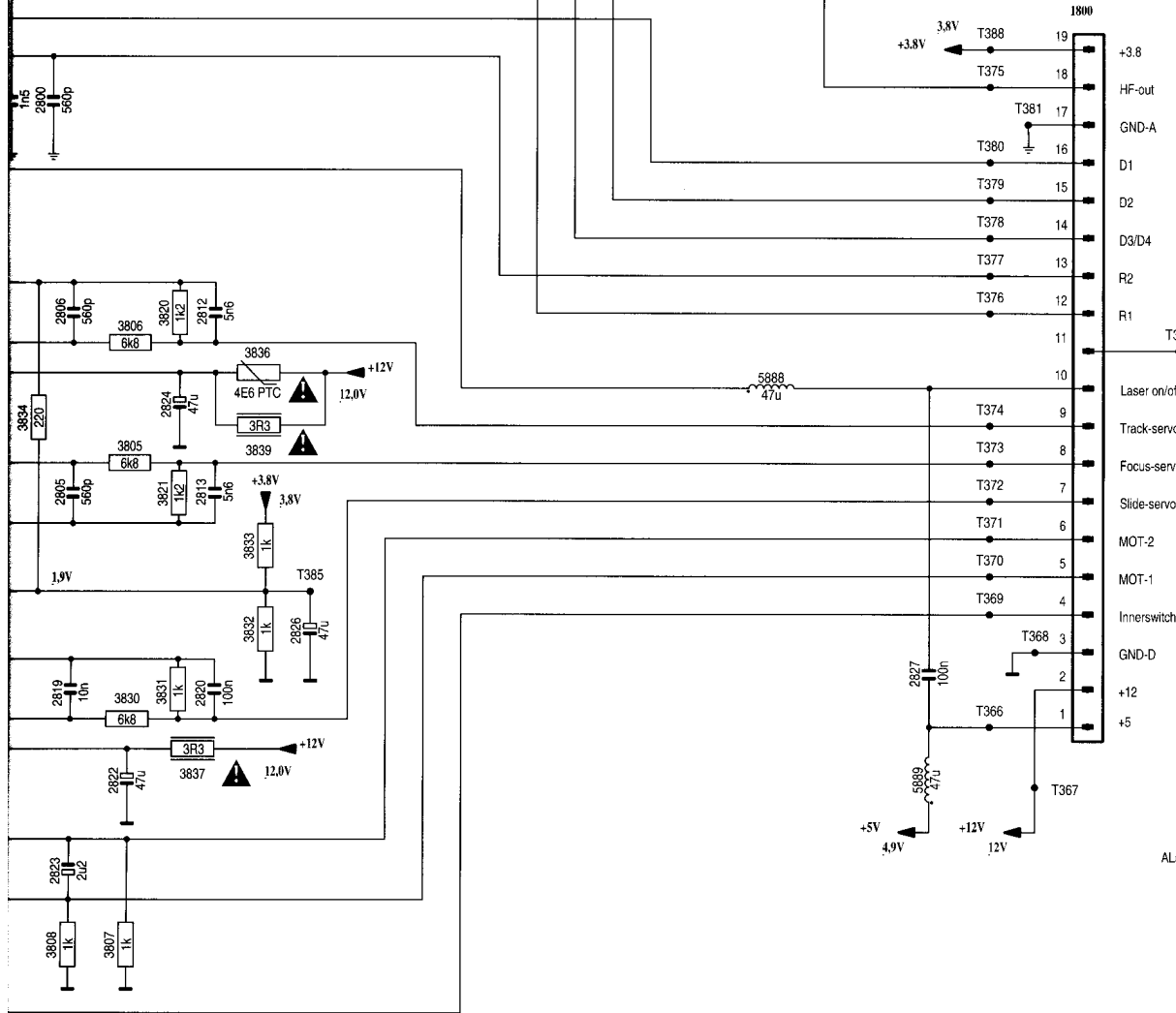
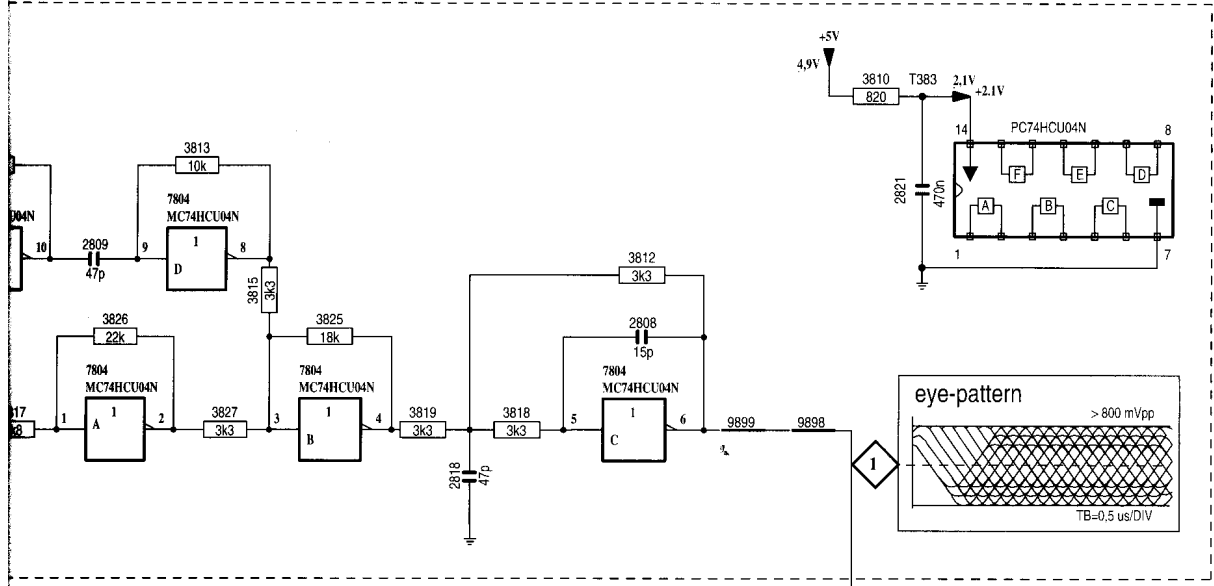
TO / FROM KARAOKE BOARD



DC-voltages measured in Tuner FM Stereo

- 00
- 135
- 183
- 183
- 352
- 455
- 550
- 750
- 750

7 8 9 10 11 12 13 14 15 16 17



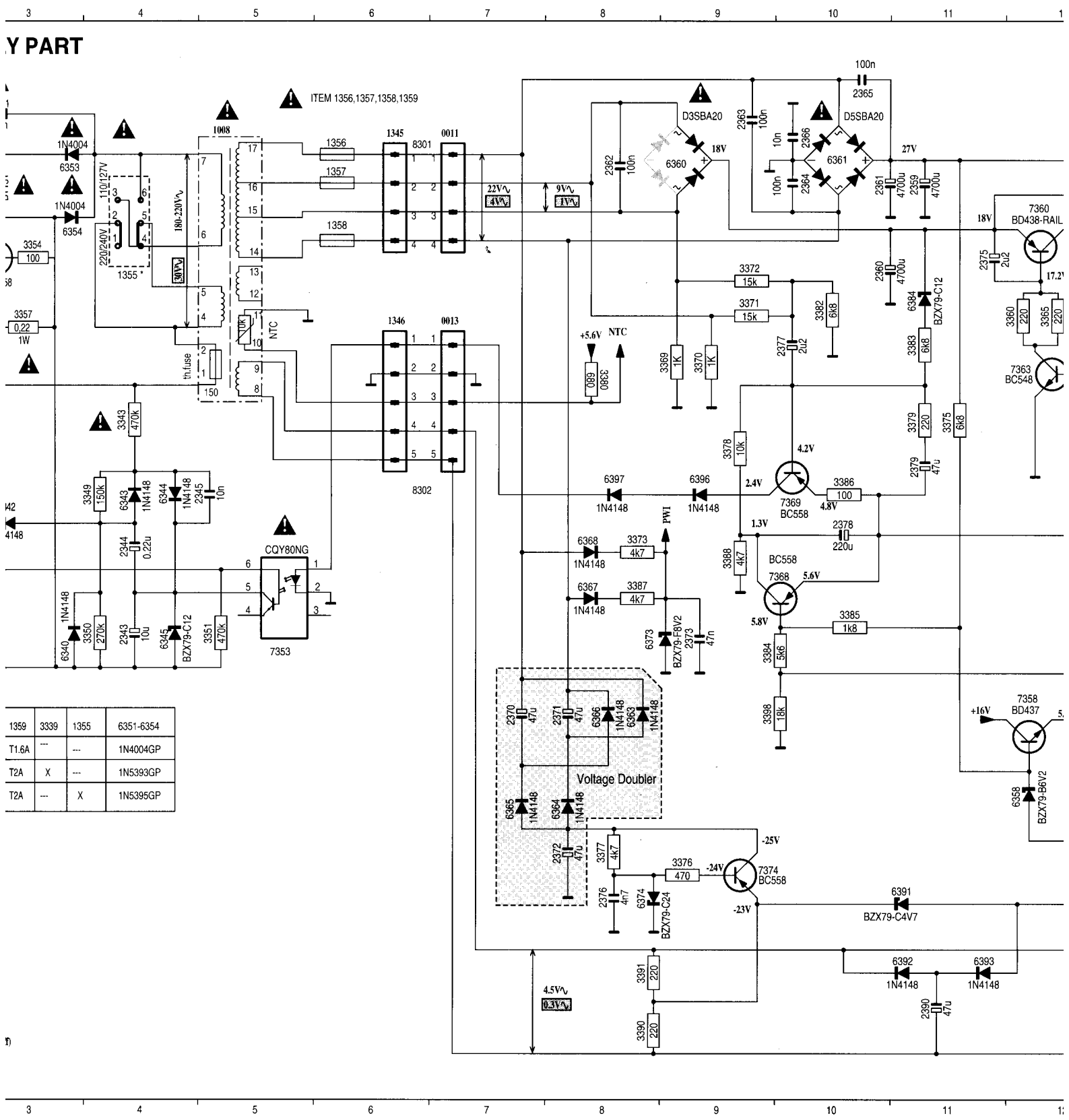
to/from COMBI BOARD
(connector 1825)

ALPC ... automatic laser power control



DC VOLTAGES MEASURED IN
EVM PLAY MODE 1KHz 0dB LEVEL.

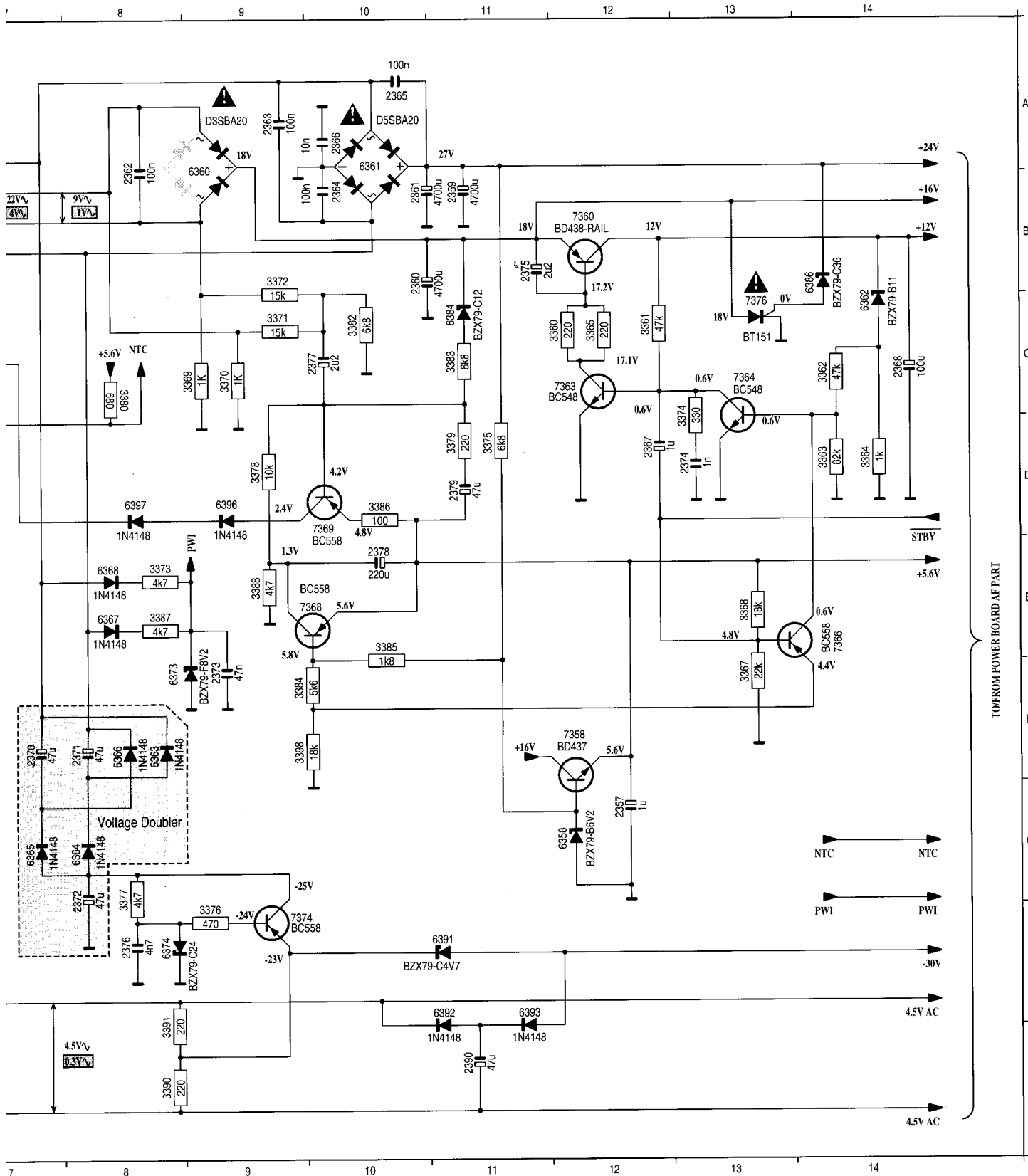
8 9 10 11 12 13 14 15 16 17



ITEM 1356,1357,1358,1359

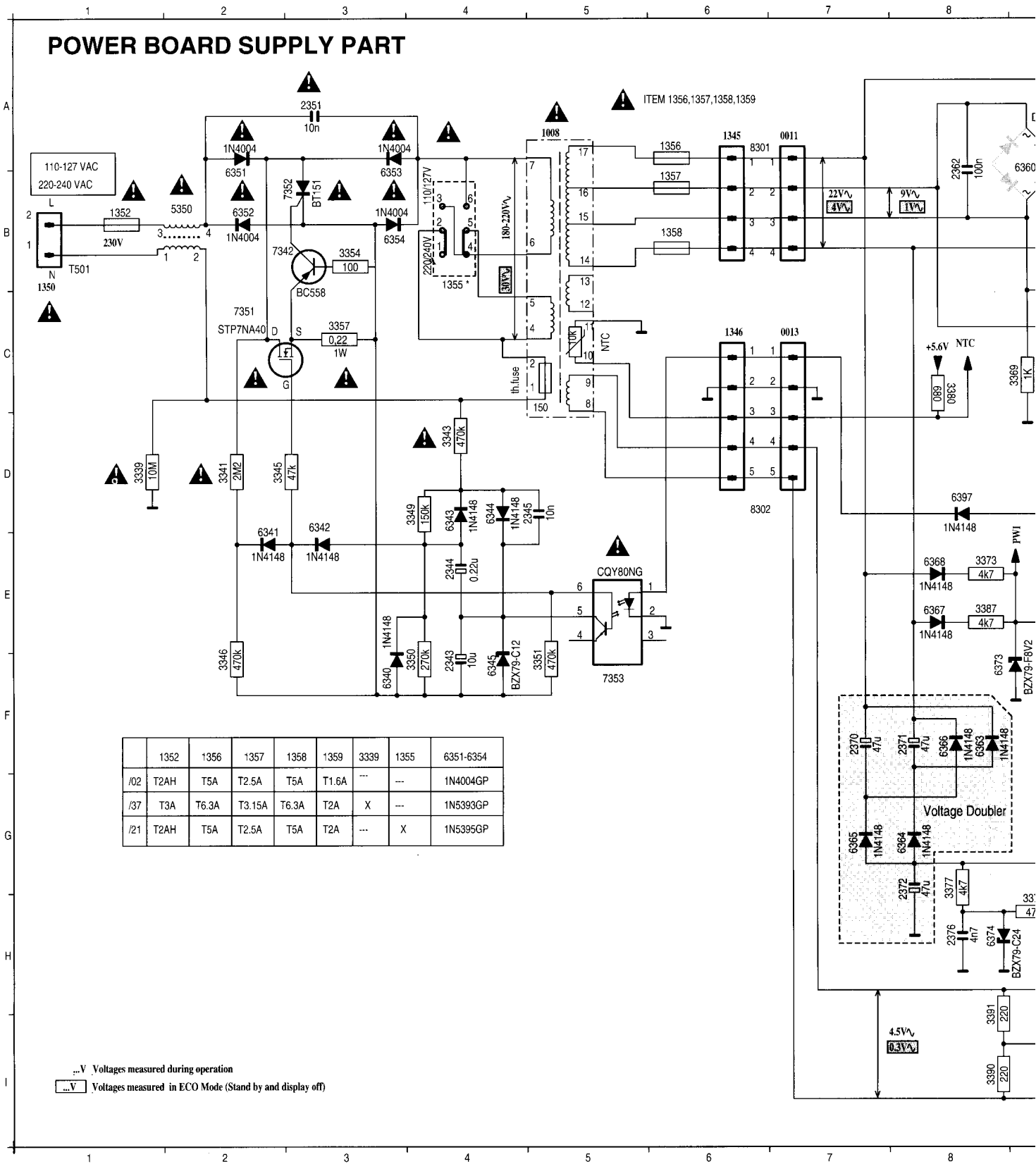
1359	3339	1355	6351-6354
T1.6A	---	---	1N4004GP
T2A	X	---	1N5393GP
T2A	---	X	1N5395GP

Voltage Doubler



- TO/FROM POWER BOARD AT PART
- 0011 A 7
 - 0013 B 7
 - 1008 A 5
 - 1345 A 6
 - 1346 B 6
 - 1350 B 1
 - 1352 B 1
 - 1355 B 4
 - 1356 A 6
 - 1357 B 6
 - 1358 B 6
 - 2343 F 4
 - 2344 E 4
 - 2345 D 5
 - 2351 A 3
 - 2357 G12
 - 2359 B11
 - 2360 B10
 - 2361 B10
 - 2362 A 8
 - 2363 A 9
 - 2364 B10
 - 2365 A10
 - 2366 A10
 - 2367 D12
 - 2368 C14
 - 2370 F 7
 - 2371 F 8
 - 2372 G 8
 - 2373 F 9
 - 2374 D13
 - 2375 H 8
 - 2376 H 8
 - 2377 C10
 - 2378 E10
 - 2379 D11
 - 2390 I11
 - 3339 D 1
 - 3341 D 2
 - 3343 D 4
 - 3345 D 2
 - 3346 F 2
 - 3349 D 4
 - 3350 F 4
 - 3351 F 5
 - 3354 B 3
 - 3357 C 3
 - 3358 C 3
 - 3360 C12
 - 3361 C12
 - 3362 C14
 - 3363 D14
 - 3364 D14
 - 3365 C12
 - 3367 F13
 - 3368 E13
 - 3369 C 9
 - 3370 C 9
 - 3371 C 9
 - 3372 B 9
 - 3373 E 8
 - 3374 C13
 - 3375 D11
 - 3376 H 9
 - 3377 G 8
 - 3378 D 9
 - 3379 D11
 - 3380 C 8
 - 3382 C10
 - 3383 C11
 - 3384 F 9
 - 3385 E10
 - 3386 D10
 - 3387 E 8
 - 3388 E 9
 - 3390 I 8
 - 3391 H 8
 - 3398 F 9
 - 5350 B 2
 - 6340 F 3
 - 6341 E 2
 - 6342 D 3
 - 6343 D 4
 - 6344 D 4
 - 6345 F 4
 - 6351 B 2
 - 6352 B 2
 - 6353 B 3
 - 6354 B 3
 - 6358 G12
 - 6360 A 9
 - 6361 A10
 - 6362 C14
 - 6363 F 8
 - 6364 G 8
 - 6365 G 7
 - 6366 F 8
 - 6367 E 8

POWER BOARD SUPPLY PART



	1352	1356	1357	1358	1359	3339	1355	6351-6354
/02	T2AH	T5A	T2.5A	T5A	T1.6A	---	---	1N4004GP
/37	T3A	T6.3A	T3.15A	T6.3A	T2A	X	---	1N5393GP
/21	T2AH	T5A	T2.5A	T5A	T2A	---	X	1N5395GP

...V Voltages measured during operation
 [] V Voltages measured in ECO Mode (Stand by and display off)

