

Service Service Service

Product Service Group CE Audio

Service Information

Already published Service Informations :

CORRECTION TO SERVICE MANUAL

*Page 9-5 : Due to some error, the Tape Adjustment & Check Table is enclosed.

***Correction of Mechanical & Accessories parts list (Page 13-2):**

Change	0151	3139 118 16080	Cover Cassette Left
	0152	3139 118 16090	Cover Cassette Right
	0153	3139 114 72820	Lens Cassette Left
	0154	3139 114 72830	Lens Cassette Right
	1503	3139 110 35880	FFC Foil 15P/180/15P BD
Delete	0309, 0310		

***Correction of circuit drawing and parts list for Front Control Board:**

Change	6842	9322 172 75676	LED VS LTL-1CHKFK
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***Correction of circuit drawing and parts list for Front Display Board:**

Change	3504	4822 116 83883	470R 5% 0,5W
	3505	4822 116 83883	470R 5% 0,5W
	5403	2422 543 01069	RES XTL 32,768kHz
Delete	3587, 3588		

***Correction of circuit drawing and parts list for AF9 Board:**

Add	4148	4822 051 30008	0R Jumper 0603
	4151	4822 051 30008	0R Jumper 0603
	4152	4822 051 30008	0R Jumper 0603
Change	3534	4822 051 30273	27k 5% 0,062W
Delete	4102, 4118		

ADDITION TO SERVICE MANUAL

*Selected spare parts are now available for the Left & Right Loud-speaker Boxes.

9965 000 09500	Woofers 5,25"
9965 000 07455	Tweeter 2"
9965 000 09597	Piezo Assembly
9965 000 07457	Cloth Frame Assembly
9965 000 03233	Grommet
9965 000 07467	Cosmetic Cap
9965 000 09598	Woofers Ring

CHANGES DURING PRODUCTION

MECHANICAL & ACCESSORIES PARTS LIST (Page 13-2)

*From production week 0140 onwards the following has been changed due to UL Requirement to use V2 material for all major enclosure parts.

Change	0253	3139 114 74780	Panel Left (V2)
	0254	3139 114 74790	Panel Right (V2)
	0255	3139 114 74800	Cover Top (V2)
	0256	3139 114 74850	Panel Rear (V2)

FRONT CONTROL BOARD

*From production week 0110 onwards pt.2 Board (identified by the last digit of the 12NC - 3139 113 34462) is introduced. For this reason new layout and circuit drawing are enclosed.

Reason : ESD solution.

FRONT DISPLAY BOARD

*From production week 0110 onwards pt.2 Board (identified by the last digit of the 12NC - 3139 113 34472) is introduced. For this reason new layout and circuit drawing are enclosed.

Reason : Solution for tuner-locking issue.

Add	6415	4822 130 11397	BAS316
Change	3409	4822 117 12925	47k 1% 0,063W
Delete	3405		

Reason : ESD solution.

Add	2585	4822 126 13883	220pF 5% 50V
	2586	4822 126 13883	220pF 5% 50V
	2587	3198 017 41050	1uF 10V
	2588	4822 126 13879	220nF +80/-20% 16V
	2589	3198 017 41050	1uF 10V
	5408	4822 157 62552	Coil 2,2uH 5%
	5409	4822 157 62552	Coil 2,2uH 5%
Change	2563	5322 126 11583	10nF 10% 50V
Delete	9513, 9514		Bare wires

*From production week 0115 onwards the software of the main processor IC (7400) has been upgrade to version 14. The new service code is 9965 000 10407.

(P.T.O.)

*From production week 0126 onwards the following has been changed to increase the Filament voltage.

Change	3407	4822 051 20478	4R7 5% 0,1W
	3408	4822 051 20478	4R7 5% 0,1W
	3410	4822 051 20478	4R7 5% 0,1W
	3411	4822 051 20478	4R7 5% 0,1W
	3535	4822 051 20478	4R7 5% 0,1W
	3536	4822 051 20478	4R7 5% 0,1W
	3570	4822 051 20478	4R7 5% 0,1W
	3571	4822 051 20478	4R7 5% 0,1W

*From production week 0126 onwards the following has been changed to lower ADC step from 255 to 253 so as to solve irregularly power-up recording problem.

Add	3524	4822 051 30109	10R 5% 0,062W
Delete	4405		

AF9 BOARD

*From production week 0110 onwards pt.3 Board (identified by the last digit of the 12NC - 3139 113 34353) is introduced.

Reason : For process, EMC & ESD improvement.

Add	2950	4822 126 13881	470pF 5% 50V
	2951	4822 126 13881	470pF 5% 50V
	2952	4822 122 31765	100pF 2% 63V
	2953	4822 126 13881	470pF 5% 50V
Delete	2901		

*From production week 0122 onwards the following has been changed for GSM solution.

Add	3525	4822 051 30471	470R 5% 0,062W
	3526	4822 051 30471	470R 5% 0,062W
	3645	4822 051 30221	220R 5% 0,062W
	3646	4822 051 30221	220R 5% 0,062W
	4153	4822 051 30008	0R Jumper 0603
	4641	4822 051 30008	0R Jumper 0603
	4642	4822 051 30008	0R Jumper 0603
Delete	3641, 3642		

*From production week 0133 onwards the following has been changed to solve capacitor current leakage issue.

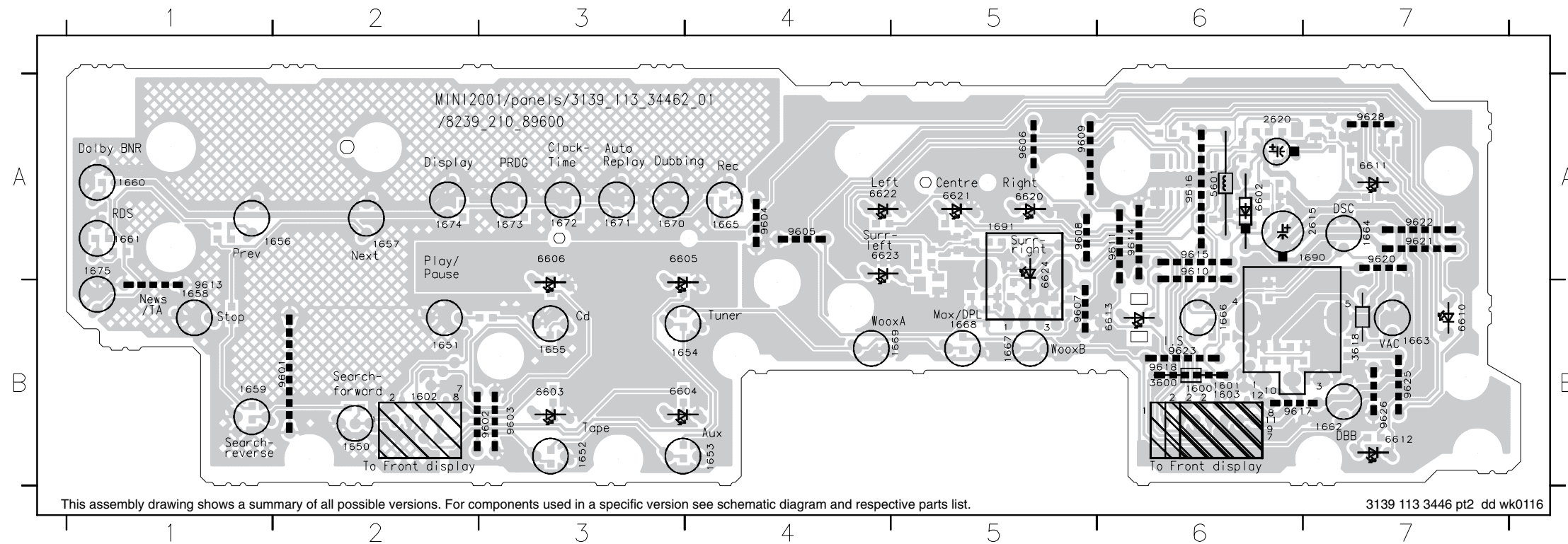
Change	2503	4822 124 22466	1uF 20% 50V
	2504	4822 124 22466	1uF 20% 50V
	2511	4822 124 22466	1uF 20% 50V
	2512	4822 124 22466	1uF 20% 50V

*During production pt.4 Board (identified by the last digit of the 12NC - 3139 113 34354) is introduced. For this reason new layout and circuit drawing are enclosed.

FRONT CONTROL BOARD

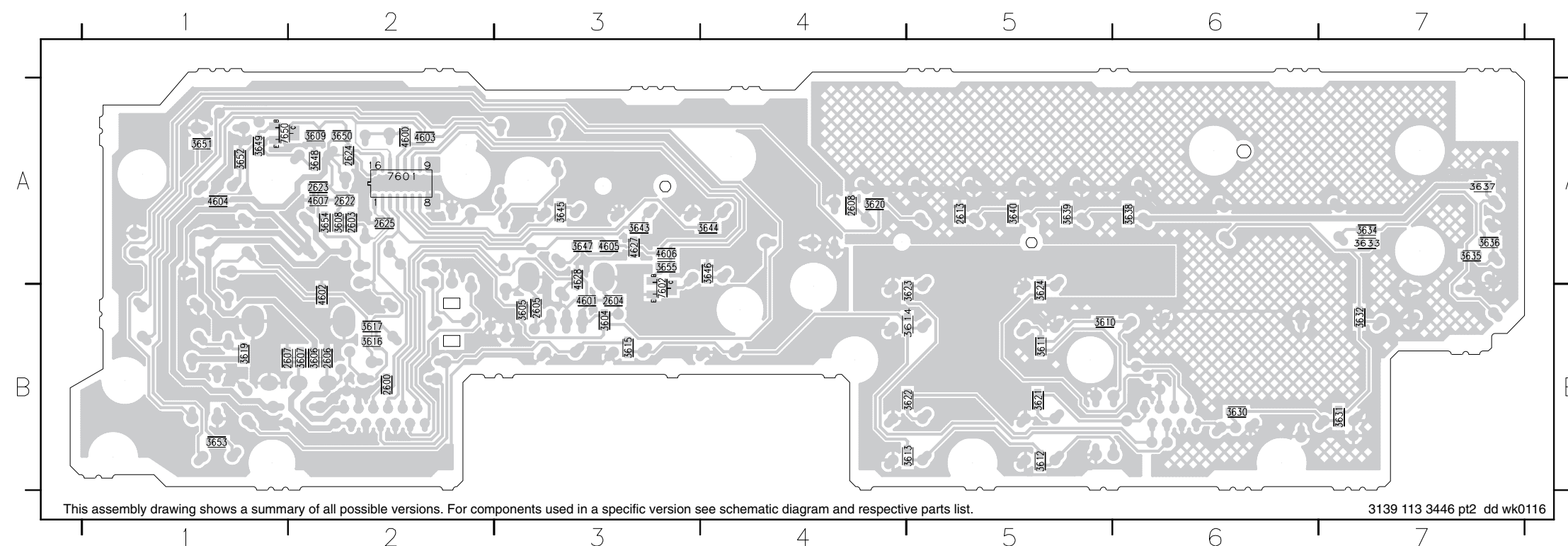
FRONT CONTROL BOARD - COMPONENT LAYOUT

1600 B6 1650 B2 1654 B3 1658 B1 1662 B7 1666 B6 1670 A3 1674 A2 2615 A7 5601 A6 6605 A3 6612 B7 6622 A4 9602 B3 9606 A5 9610 A6 9615 A6 9620 A7 9625 B7
 1601 B6 1651 B2 1655 B3 1659 B1 1663 B7 1667 B5 1671 A3 1675 A1 2620 A6 6602 A6 6606 A3 6613 B6 6623 A4 9603 B3 9607 B5 9611 A6 9616 A6 9621 A7 9626 B7
 1602 B2 1652 B3 1656 A2 1660 A1 1664 A7 1668 B5 1672 A3 1690 A7 3600 B6 6603 B3 6610 B7 6620 A5 6624 A5 9604 A4 9608 A5 9613 B1 9617 B6 9622 A7 9628 A7
 1603 B6 1653 B4 1657 A2 1661 A1 1665 A4 1669 B5 1673 A3 1691 A5 3618 B7 6604 B3 6611 A7 6621 A5 9601 B2 9605 A4 9609 A5 9614 A6 9618 B6 9623 B6



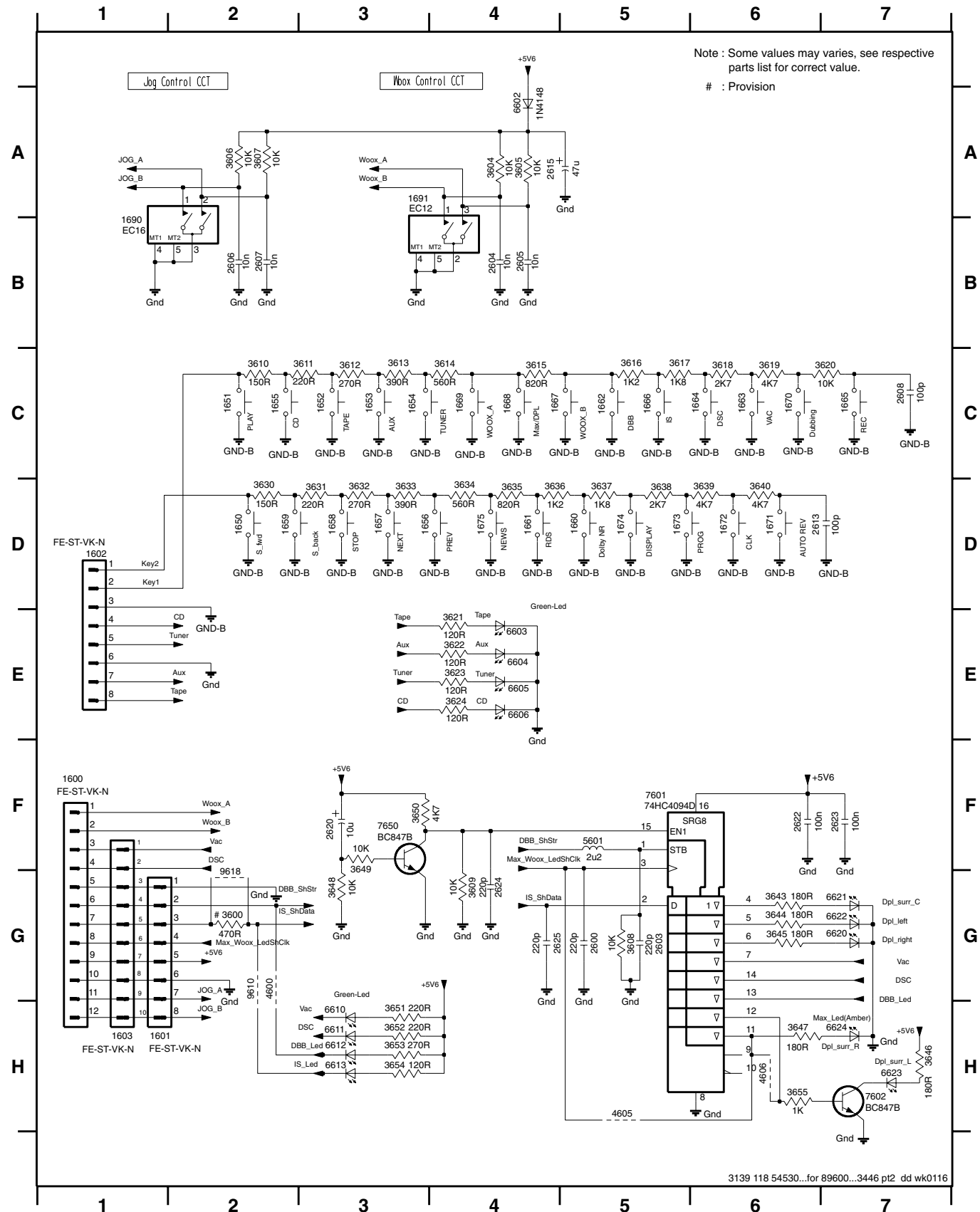
FRONT CONTROL BOARD - CHIP LAYOUT

2600 B2 2606 B2 2622 A2 3604 B3 3608 A2 3612 B5 3616 B2 3621 B5 3630 B6 3634 A7 3638 A6 3644 A4 3648 A2 3652 A1 4600 A2 4604 A1 4627 A3 7650 A1
 2603 A2 2607 B1 2623 A2 3605 B3 3609 A2 3613 B5 3617 B2 3622 B5 3631 B7 3635 A7 3639 A5 3645 A3 3649 A1 3653 B1 4601 B3 4605 A3 4628 A3
 2604 B3 2608 A4 2624 A2 3606 B2 3610 B5 3614 B5 3619 B1 3623 B5 3632 B7 3636 A7 3640 A5 3646 A4 3650 A2 3654 A2 4602 B2 4606 A3 7601 A2
 2605 B3 2613 A5 2625 A2 3607 B2 3611 B5 3615 B3 3620 A4 3624 B5 3633 A7 3637 A7 3643 A3 3647 A3 3651 A1 3655 A3 4603 A2 4607 A2 7602 B3



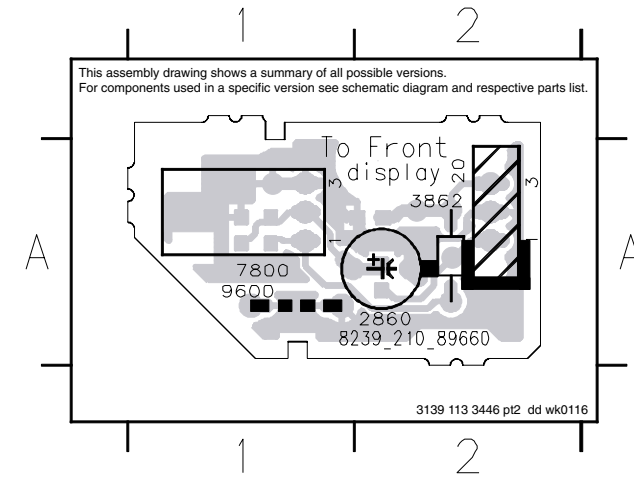
FRONT CONTROL BOARD - CIRCUIT DIAGRAM

- 1600 F1 1653 C3 1660 D5 1667 C4 1674 D5 2605 B4 2622 F6 3606 A2 3613 C3 3620 C7 3632 D3 3639 D6 3648 G3 3655 H6 6604 E4 6620 G7 7650 F3
- 1601 H2 1654 C3 1661 D4 1668 C4 1675 D4 2606 B2 2623 F7 3607 A2 3614 C4 3621 E4 3633 D3 3640 D6 3649 F3 4600 G2 6605 E4 6621 G7 9610 G2
- 1602 D1 1655 C2 1662 C5 1669 C4 1690 B1 2607 B2 2624 G4 3608 G5 3615 C4 3622 E4 3634 D4 3643 G6 3650 F3 4605 H5 6606 E4 6622 G7 9618 G2
- 1603 H1 1656 D3 1663 C6 1670 C6 1691 A3 2608 C7 2625 G4 3609 G4 3616 C5 3623 E4 3635 D4 3644 G6 6610 H3 6623 H7
- 1650 D2 1657 D3 1664 C6 1671 D6 2600 G5 2613 D6 3600 G2 3610 C2 3617 C5 3624 E4 3636 D4 3645 G6 3652 H3 5601 F5 6611 H3 6624 H7
- 1651 C2 1658 D3 1665 C7 1672 D6 2603 G5 3604 A4 3611 C3 3618 C6 3630 D2 3637 D5 3646 H7 3653 H3 6602 A4 6612 H3 7601 F5
- 1652 C3 1659 D2 1666 C5 1673 D5 2604 B4 2620 F3 3605 A4 3612 C3 3619 C6 3631 D3 3638 D5 3647 H6 3654 H3 6603 E4 6613 H3 7602 H7



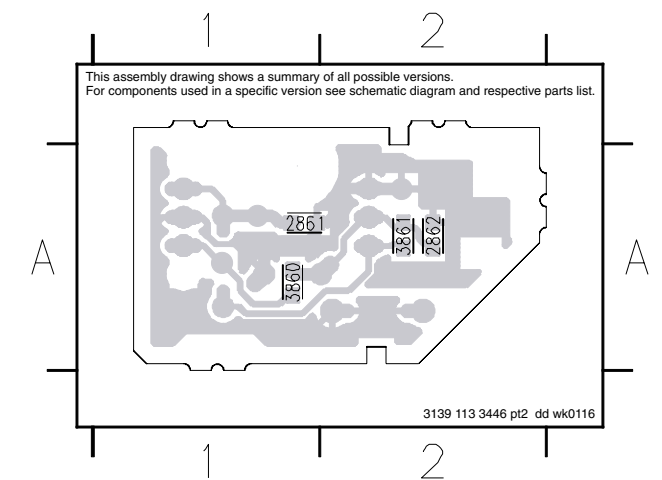
IR-EYE BOARD - COMPONENT LAYOUT

- 20 A2 3862 A2 9600 A1
- 2860 A2 7800 A1



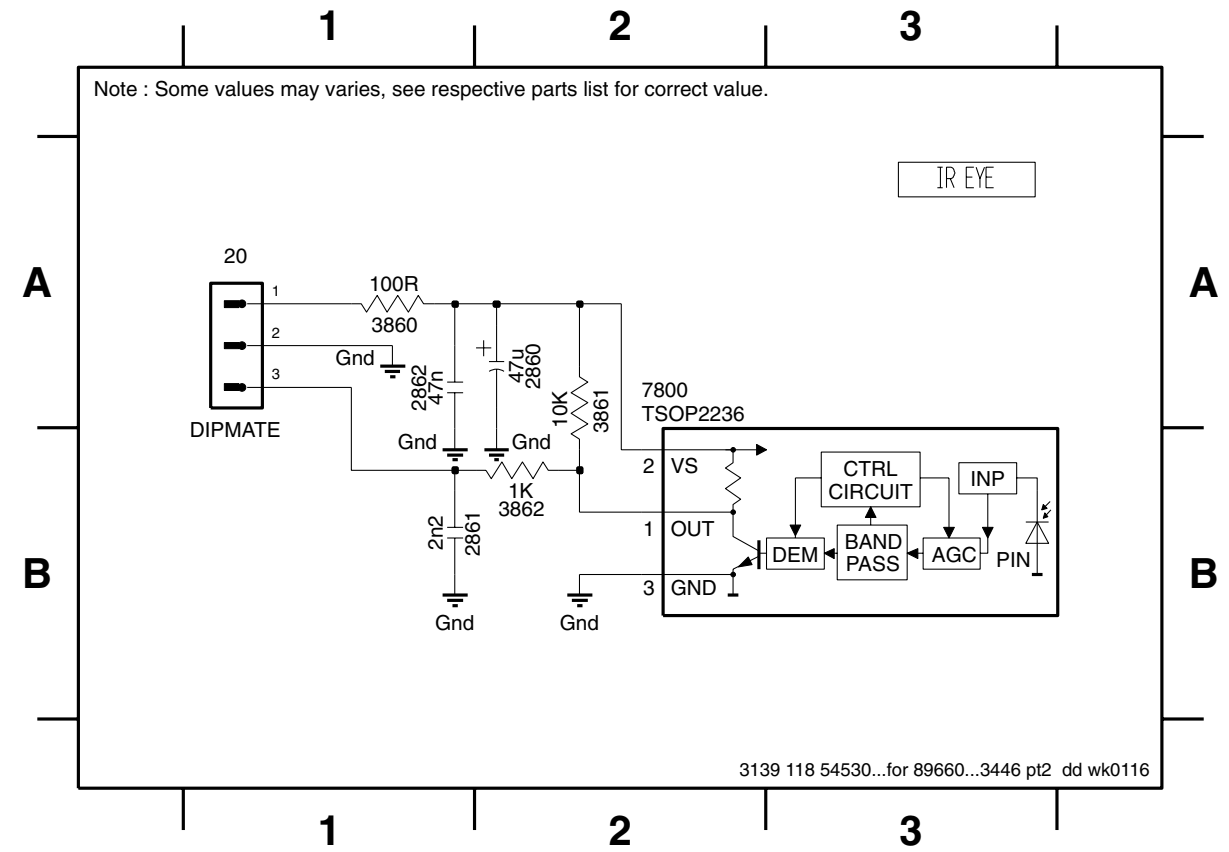
IR-EYE BOARD - CHIP LAYOUT

- 2861 A1 2862 A2 3860 A1 3861 A2



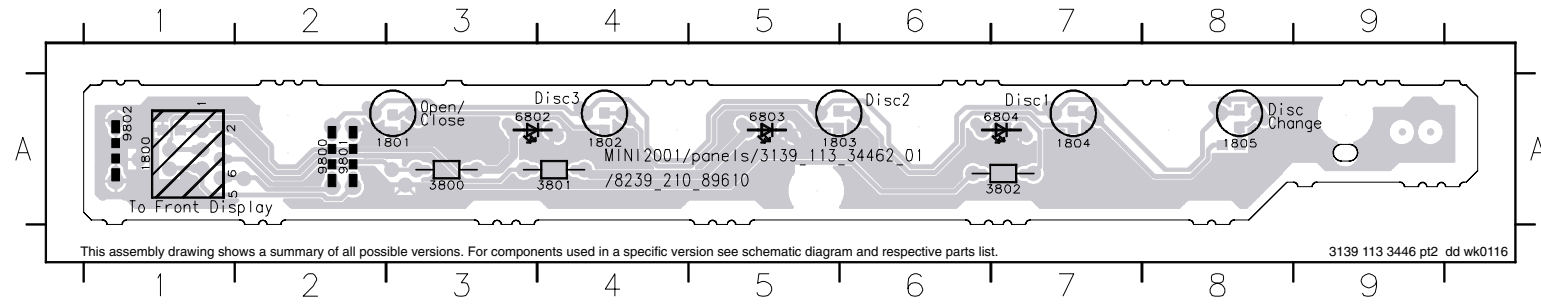
IR-EYE BOARD - CIRCUIT DIAGRAM

- 20 A1 2860 A2 2861 B1 2862 A1 3860 A1 3861 A2 3862 B2 7800 A2



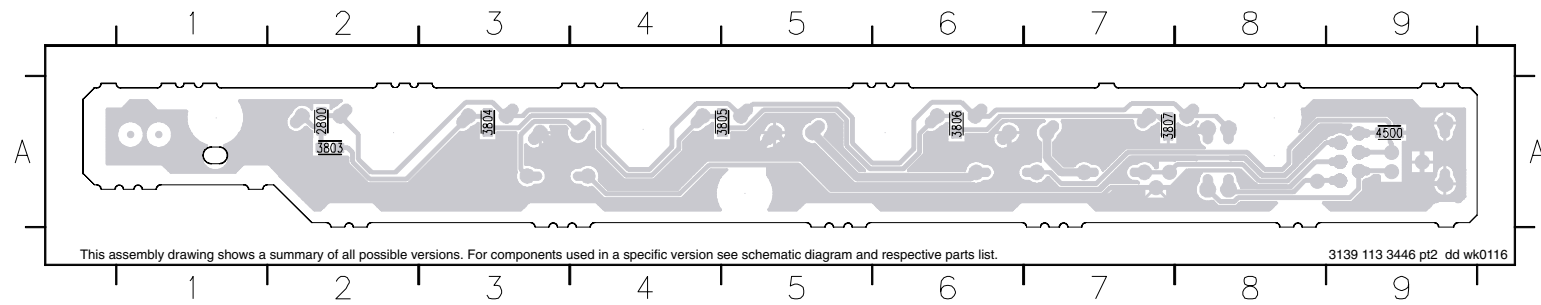
KEY-CDC BOARD - COMPONENT LAYOUT

1800 A1 1801 A3 1802 A4 1803 A5 1804 A7 1805 A8 3800 A3 3801 A4 3802 A7 6802 A3 6803 A5 6804 A7 9800 A2 9801 A2 9802 A1



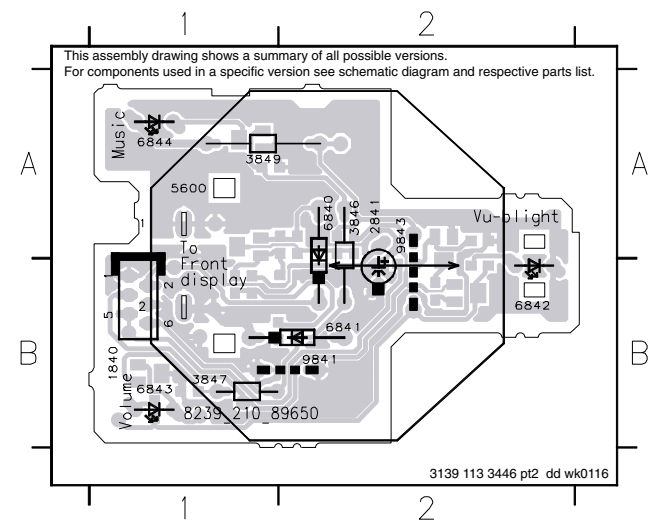
KEY-CDC BOARD - CHIP LAYOUT

2800 A2 3803 A2 3804 A3 3805 A5 3806 A6 3807 A7 4500 A9



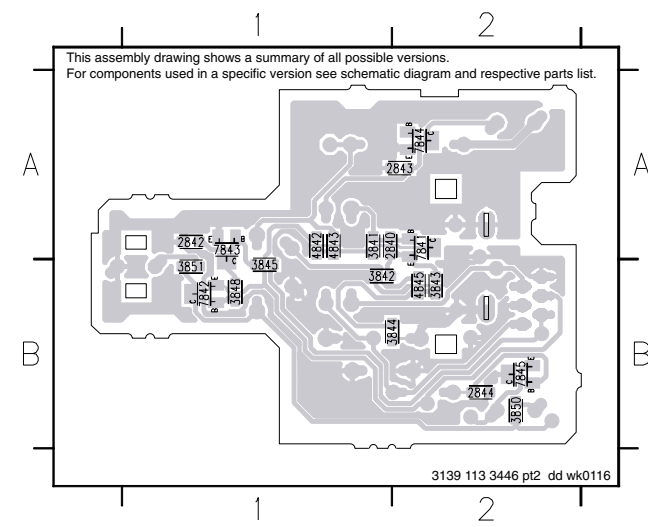
VU METER BOARD - COMPONENT LAYOUT

1840 B1 3846 A2 3849 A1 6840 A2 6842 B2 6844 A1 9843 A2
2841 A2 3847 B1 5600 A1 6841 B2 6843 B1 9841 B2



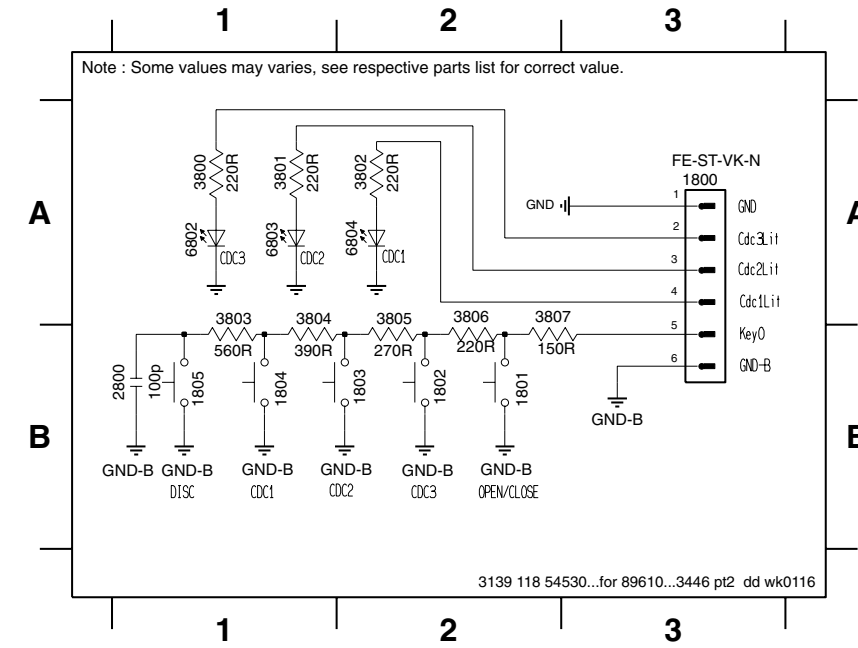
VU METER BOARD - CHIP LAYOUT

2840 A1 2844 B2 3843 B2 3848 B1 4842 A1 7841 A2 7844 A2
2842 A1 3841 A1 3844 B1 3850 B2 4843 A1 7842 B1 7845 B2
2843 A2 3842 B1 3845 B1 3851 B1 4845 B2 7843 A1



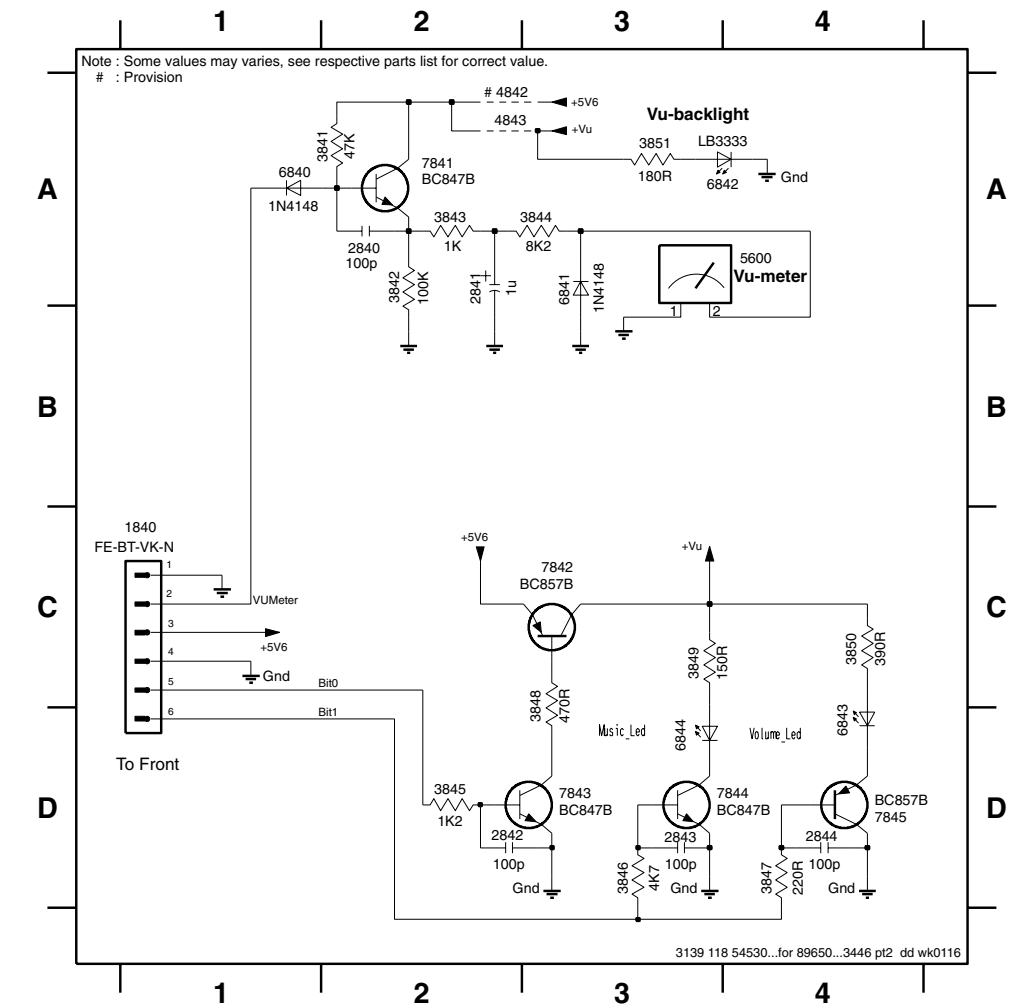
KEY-CDC BOARD - CIRCUIT DIAGRAM

1800 A3 1802 B2 1804 B1 2800 B1 3801 A1 3803 A1 3805 A2 3807 A2 6803 A1
1801 B2 1803 B2 1805 B1 3800 A1 3802 A2 3804 A1 3806 A2 6802 A1 6804 A2



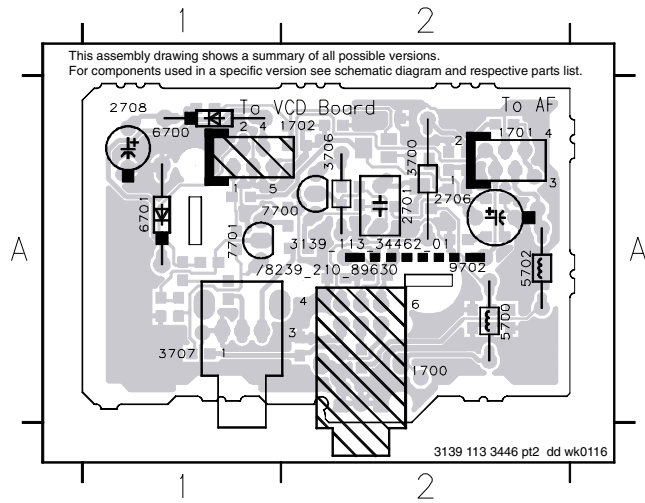
VU METER BOARD - CIRCUIT DIAGRAM

1840 C1 2842 D2 3841 A2 3844 A3 3847 D4 3850 C4 4843 A2 6841 A3 6844 D3 7843 D3
2840 A2 2843 D3 3842 A2 3845 D2 3848 C3 3851 A3 5600 A4 6842 A4 7841 A2 7844 D3
2841 A2 2844 D4 3843 A2 3846 D3 3849 C3 4842 A2 6840 A1 6843 D4 7842 C3 7845 D4



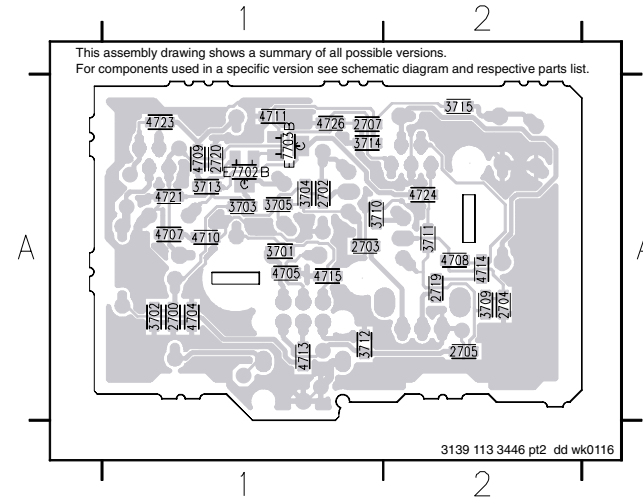
KARAOKE BOARD - COMPONENT LAYOUT

1700 A2 2701 A2 3700 A2 5700 A2 6701 A1 9702 A2
 1701 A2 2706 A2 3706 A2 5702 A2 7700 A1
 1702 A2 2708 A1 3707 A1 6700 A1 7701 A1



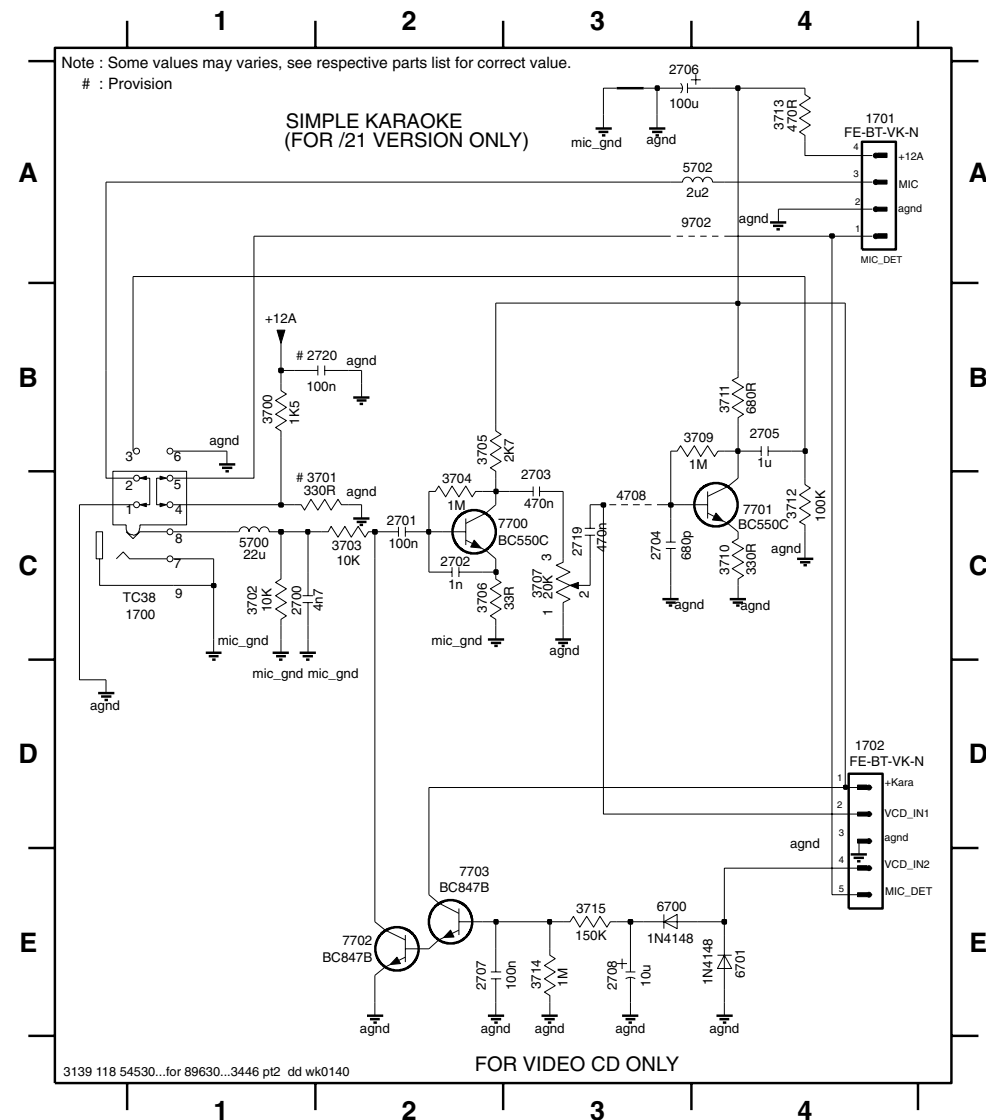
KARAOKE BOARD - CHIP LAYOUT

2700 A1 2719 A2 3705 A1 3714 A1 4709 A1 4721 A1
 2702 A1 2720 A1 3709 A2 3715 A2 4710 A1 4723 A1
 2703 A1 3701 A1 3710 A1 4704 A1 4711 A1 4724 A2
 2704 A2 3702 A1 3711 A2 4705 A1 4713 A1 4726 A1
 2705 A2 3703 A1 3712 A1 4707 A1 4714 A2 7702 A1
 2707 A1 3704 A1 3713 A1 4708 A2 4715 A1 7703 A1



KARAOKE BOARD - CIRCUIT DIAGRAM

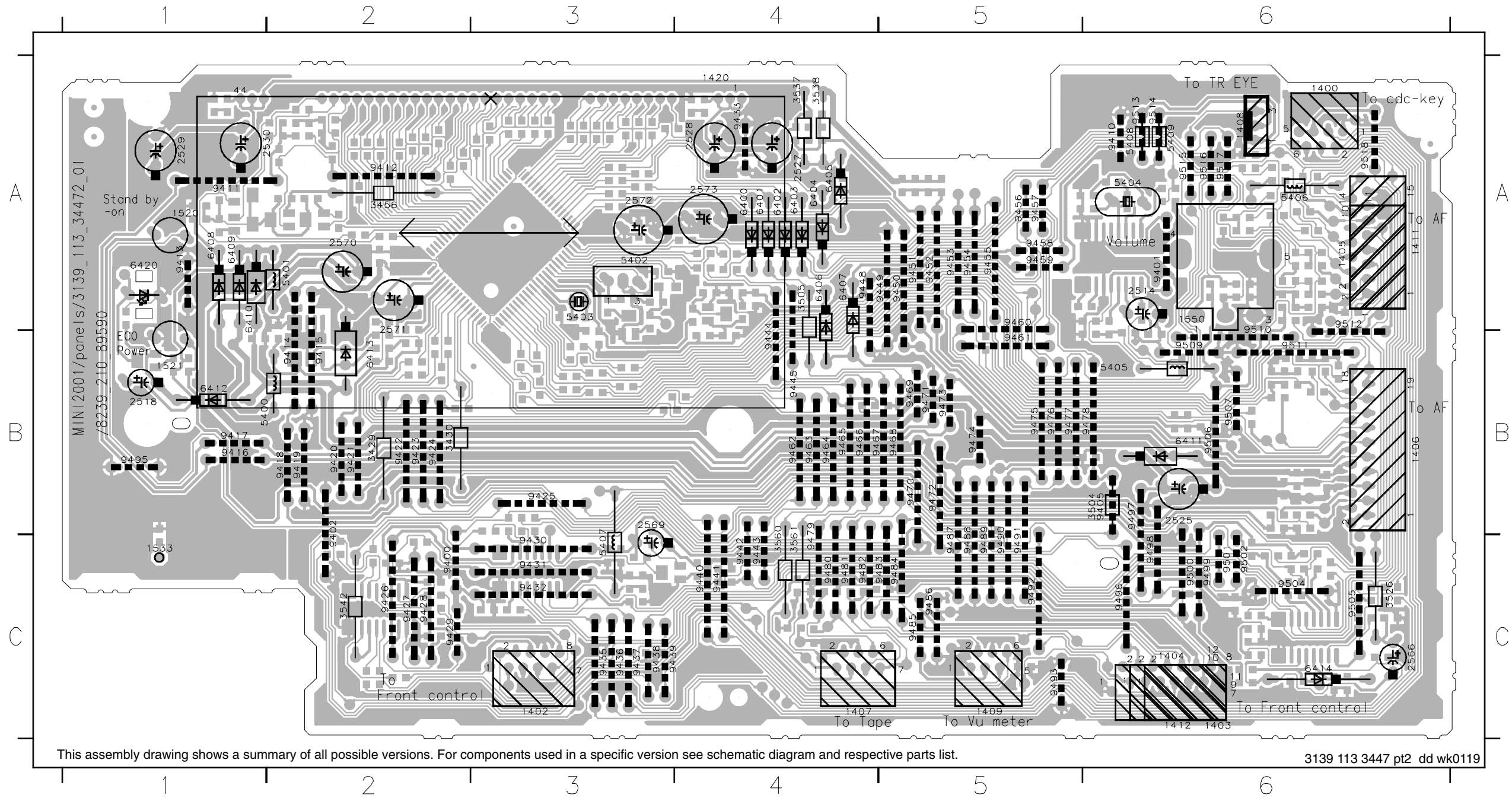
1700 C1 2700 C1 2703 C3 2706 A3 2719 C3 3701 C2 3704 C2 3707 C3 3711 B4 3714 E3 5700 C1 6701 E4 7702 E2
 1701 A4 2701 C2 2704 C3 2707 E2 2720 B2 3702 C1 3705 B2 3709 B4 3712 C4 3715 E3 5702 A4 7700 C2 7703 E2
 1702 D4 2702 C2 2705 B4 2708 E3 3700 B1 3703 C2 3706 C2 3710 C4 3713 A4 4708 C3 6700 E3 7701 C4 9702 A4



FRONT DISPLAY BOARD

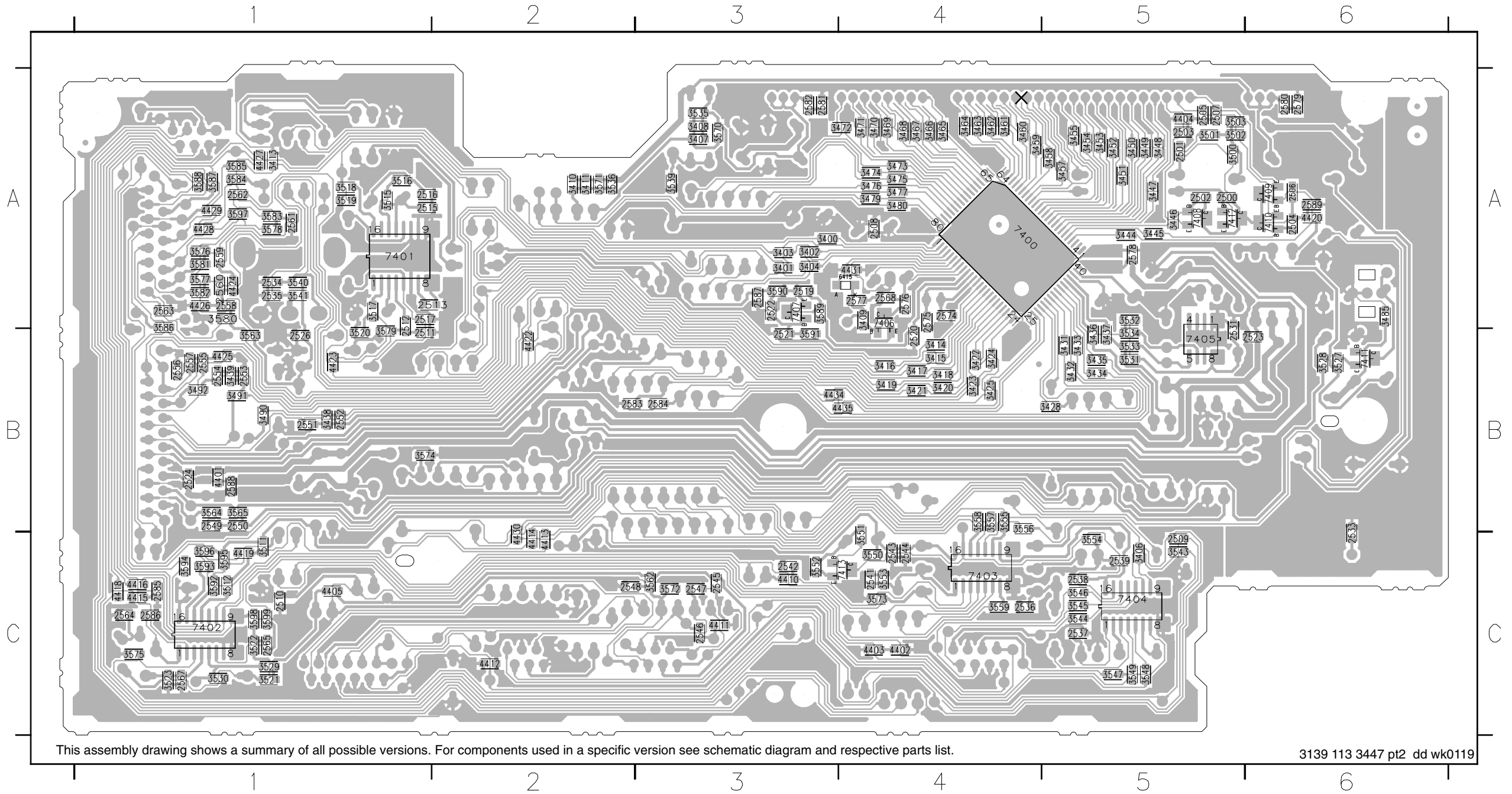
FRONT DISPLAY BOARD - COMPONENT LAYOUT

1400 A6	1409 C5	2514 A6	2569 B3	3504 B6	5400 B1	5408 A6	6406 A4	6414 C6	9412 A2	9420 B2	9428 C2	9437 C3	9445 B4	9455 A5	9463 B4	9471 B5	9479 C4	9487 C5	9496 C6	9505 C6	9514 A6
1402 C3	1411 A6	2518 B1	2570 A2	3505 A4	5401 A2	5409 A6	6407 A4	6420 A1	9413 A1	9421 B2	9429 C2	9438 C3	9448 A4	9456 A5	9464 B4	9472 B5	9480 C4	9488 C5	9497 B6	9506 B6	9515 A6
1403 C6	1412 C6	2525 B6	2571 A2	3526 C6	5402 A3	6400 A4	6408 A1	9400 C2	9414 B2	9422 B2	9430 C3	9439 C3	9449 A5	9457 A5	9465 B4	9473 B5	9481 C4	9489 C5	9498 C6	9507 B6	9516 A6
1404 C6	1420 A4	2527 A4	2572 A3	3537 A4	5403 A3	6401 A4	6409 A1	9401 A6	9415 B2	9423 B2	9431 C3	9440 C4	9450 A5	9458 A5	9466 B4	9474 B5	9482 C4	9490 C5	9499 C6	9509 B6	9517 A6
1405 A6	1520 A1	2528 A4	2573 A4	3538 A4	5404 A6	6402 A4	6410 A1	9402 B2	9416 B1	9424 B2	9432 C3	9441 C4	9451 A5	9459 A5	9467 B4	9475 B5	9483 C5	9491 C5	9500 C6	9510 A6	9518 A6
1406 B6	1521 B1	2529 A1	3429 B2	3542 C2	5405 B6	6403 A4	6411 B6	9405 B6	9417 B1	9425 B3	9433 A4	9442 C4	9452 A5	9460 A5	9468 B5	9476 B5	9484 C5	9492 C5	9501 C6	9511 B6	
1407 C4	1533 C1	2530 A1	3430 B2	3560 C4	5406 A6	6404 A4	6412 B1	9410 A6	9418 B2	9426 C2	9435 C3	9443 C4	9453 A5	9461 B5	9469 B5	9477 B5	9485 C5	9493 C5	9502 C6	9512 A6	
1408 A6	1550 A6	2566 C6	3456 A2	3561 C4	5407 C3	6405 A4	6413 B2	9411 A1	9419 B2	9427 C2	9436 C3	9444 B4	9454 A5	9462 B4	9470 B5	9478 B6	9486 C5	9495 B1	9504 C6	9513 A6	



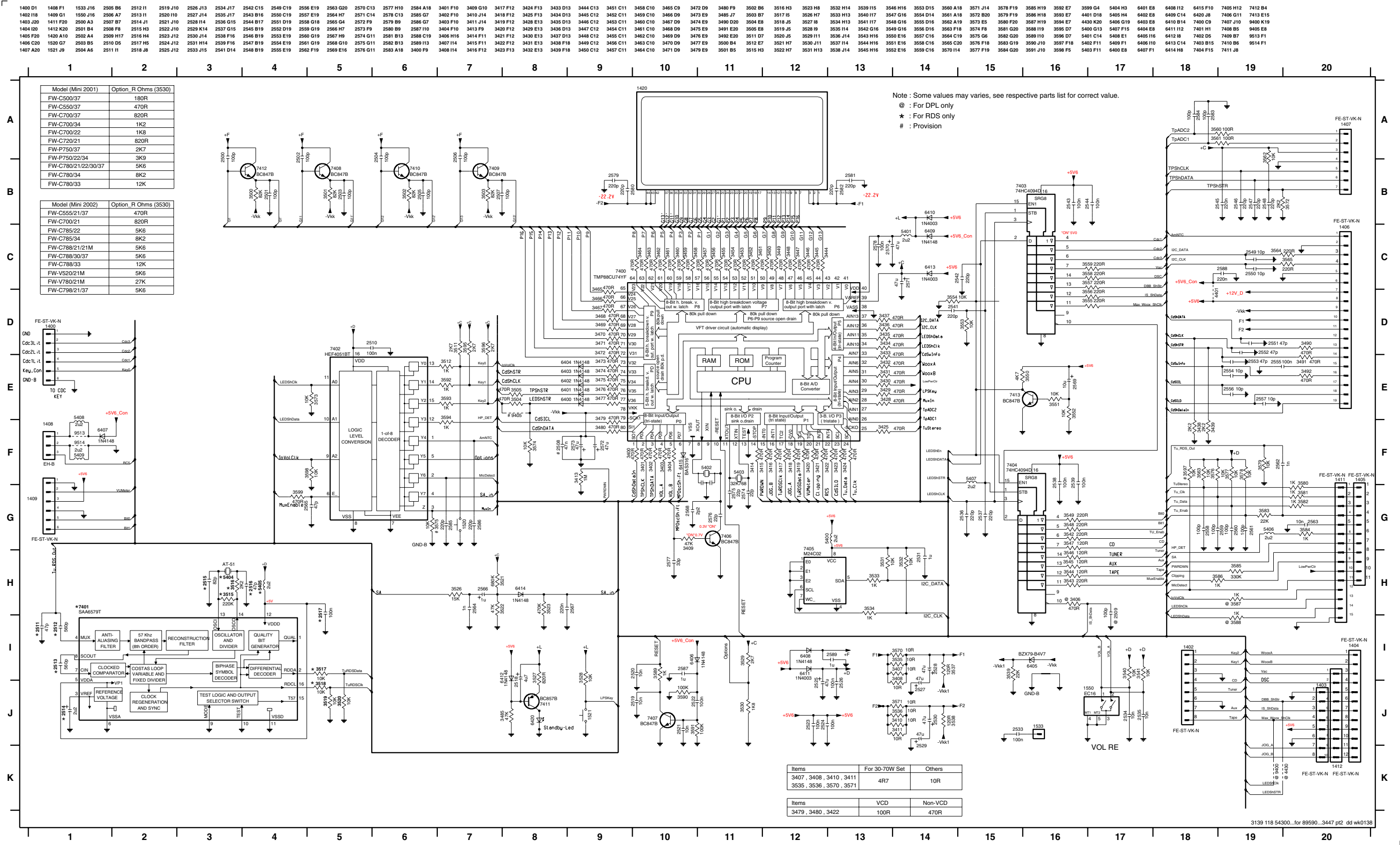
FRONT DISPLAY BOARD - CHIP LAYOUT

2500 A5	2512 A1	2531 B5	2545 C3	2557 B1	2575 A4	2587 A3	3410 A2	3423 B4	3439 B1	3455 A5	3468 A4	3485 A6	3517 A1	3532 A5	3547 C5	3559 C4	3577 A1	3589 A3	4402 C4	4419 C1	4434 B3	7409 A6
2501 A5	2513 A2	2533 C6	2546 C3	2558 A1	2576 A4	2588 B1	3411 A2	3424 B4	3444 A5	3457 A5	3469 A4	3490 B1	3518 A1	3533 B5	3548 C5	3562 C3	3578 A1	3590 A3	4403 C4	4420 A6	4435 B4	7410 A6
2502 A5	2515 A1	2534 A1	2547 C3	2559 A1	2577 A4	2589 A6	3413 A1	3425 B4	3445 A5	3458 A5	3470 A4	3491 B1	3519 A1	3534 B5	3549 C5	3563 B1	3579 B1	3591 B3	4404 A5	4422 B2	6415 A4	7411 B6
2503 A5	2516 A1	2535 A1	2548 C2	2560 A1	2578 A5	3400 A3	3414 B4	3428 B5	3446 A5	3459 A4	3471 A4	3492 B1	3520 B1	3535 A3	3550 C4	3564 B1	3580 A1	3592 C1	4405 C1	4423 B1	7400 A4	7412 A5
2504 A6	2517 A1	2536 C4	2549 B1	2561 A1	2579 A6	3401 A3	3415 B4	3431 B5	3447 A5	3460 A4	3472 A4	3500 A5	3521 C1	3536 A2	3551 C4	3565 B1	3581 A1	3593 C1	4410 C3	4424 A1	7401 A1	7413 C4
2505 A5	2519 A3	2537 C5	2550 B1	2562 A1	2580 A6	3402 A3	3416 B4	3432 B5	3448 A5	3461 A4	3473 A4	3501 A5	3522 C1	3539 A3	3552 C3	3570 A3	3582 A1	3594 C1	4411 C3	4425 B1	7402 C1	
2506 A6	2520 B4	2538 C5	2551 B1	2563 A1	2581 A3	3403 A3	3417 B4	3433 B5	3449 A5	3462 A4	3474 A4	3502 A5	3523 C1	3540 A1	3553 C4	3571 A2	3583 A1	3595 C1	4412 C2	4426 A1	7403 C4	
2507 A5	2521 B3	2539 C5	2552 B1	2564 C1	2582 A3	3404 A3	3418 B4	3434 B5	3450 A5	3463 A4	3475 A4	3503 A5	3527 B6	3541 A1	3554 C5	3572 C3	3584 A1	3596 C1	4413 C2	4427 A1	7404 C5	
2508 A4	2522 A3	2541 C4	2553 B1	2565 C1	2583 B2	3406 C5	3419 B4	3435 B5	3451 A5	3464 A4	3476 A4	3511 C1	3528 B6	3543 C5	3555 B4	3573 C4	3585 A1	3597 A1	4414 C2	4428 A1	7405 B5	
2509 C5	2523 B6	2542 C3	2554 B1	2567 C1	2584 B3	3407 A3	3420 B4	3436 B5	3452 A5	3465 A4	3477 A4	3512 C1	3529 C1	3544 C5	3556 B4	3574 B1	3586 A1	3598 C1	4415 C1	4429 A1	7406 A4	
2510 C1	2524 B1	2543 C4	2555 B1	2568 A4	2585 C1	3408 A3	3421 B4	3437 B5	3453 A5	3466 A4	3479 A4	3515 A1	3530 C1	3545 C5	3557 B4	3575 C1	3587 A1	3599 C1	4416 C1	4430 C2	7407 A3	
2511 B1	2526 B1	2544 C4	2556 B1	2574 A4	2586 C1	3409 A4	3422 B4	3438 B1	3454 A5	3467 A4	3480 A4	3516 A1	3531 B5	3546 C5	3558 B4	3576 A1	3588 A1	4401 B1	4418 C1	4431 A4	7408 A5	



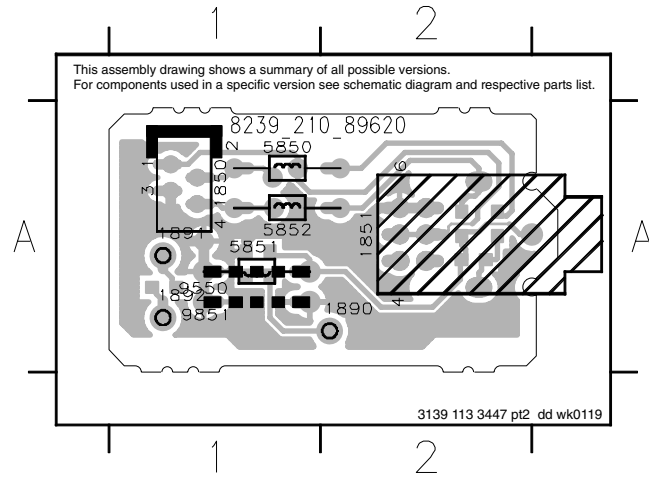
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

FRONT DISPLAY BOARD - CIRCUIT DIAGRAM



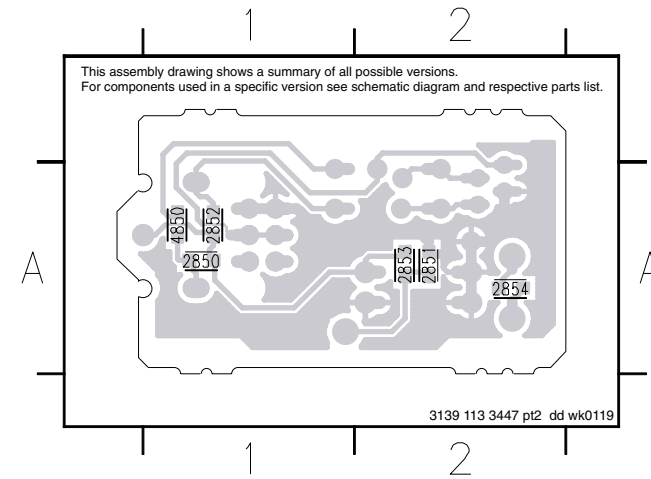
HEADPHONE BOARD - COMPONENT LAYOUT

1850 A1 1891 A1 5851 A1 9851 A1
 1851 A2 1892 A1 5852 A1
 1890 A2 5850 A1 9550 A1



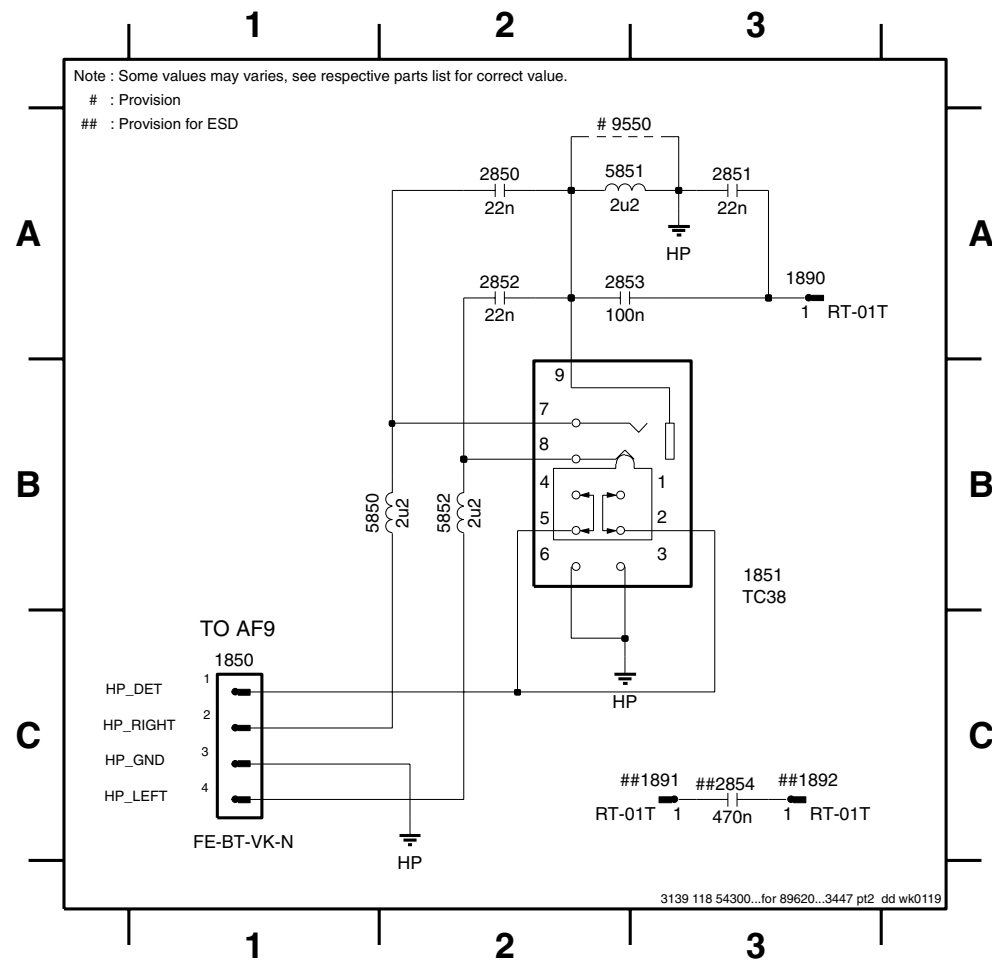
HEADPHONE BOARD - CHIP LAYOUT

2850 A1 2852 A1 2854 A2
 2851 A2 2853 A2 4850 A1



HEADPHONE BOARD - CIRCUIT DIAGRAM

1850 C1 1890 A3 1892 C3 2851 A3 2853 A2 5850 B1 5852 B2
 1851 B3 1891 C3 2850 A2 2852 A2 2854 C3 5851 A2 9550 A2

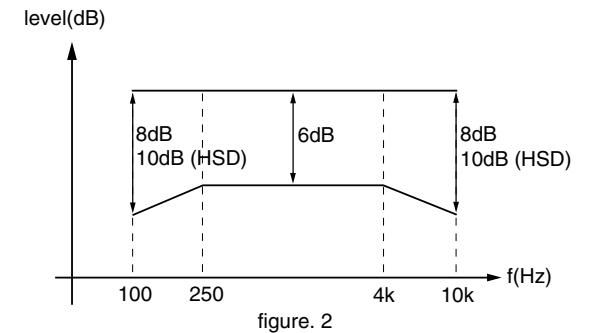
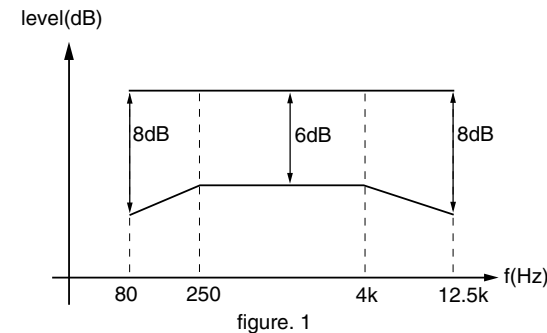


TAPE ADJUSTMENT & CHECK TABLE

	TEST CASSETTE	RECORDER MODE	MEASURE ON	READ ON	ADJUST	
					with	to
ADJUST MOTOR SPEED						
NORMAL SPEED	SBC420 3150Hz	PLAY B	1 or 2	frequency counter	3620	3150Hz +/- 0.5%
		PLAY A	LEFT RIGHT		check	3150Hz -0.8/+1.8%
CHECK WOW & FLUTTER						
DECK A & B	SBC420 3150Hz	PLAY	1 or 2	W&F-meter	check	<0.4 % DIN
ADJUST AZIMUTH						
DECK A & B	SBC420 10kHz	PLAY FWD	1 or 2	mV-meter	left hand screw	max. output level & left=right
		PLAY REV #	LEFT RIGHT		right hand screw	
CHECK PLAYBACK FREQUENCY RESPONSE						
DECK A & B	SBC420	PLAY	1 or 2	mV-meter	check	limits see fig.1
ADJUST BIAS CURRENT						
DECK B	SBC419A^	RECORD	5 or 6	mV-meter	3773	995mV
	SBC420				check	750mV +/- 1.5dB
CHECK OVERALL FREQUENCY RESPONSE AND DISTORTION						
Inject 3mV signals 100Hz, 250Hz, 1kHz, 10kHz, 12.5kHz via 3 or 4	SBC419A^ or SBC420	RECORD B				
	RECORDED CASSETTE	PLAY B	1 or 2	mV-meter	check	limits see fig. 2 *
Inject 1kHz 8.85mV via 3 or 4	SBC419A^ or SBC420	RECORD B				
	RECORDED CASSETTE	PLAY B	1 or 2	THD-meter	check	<3% *

SBC419A^: 4822 397 30069
 SBC420 : 4822 397 30071

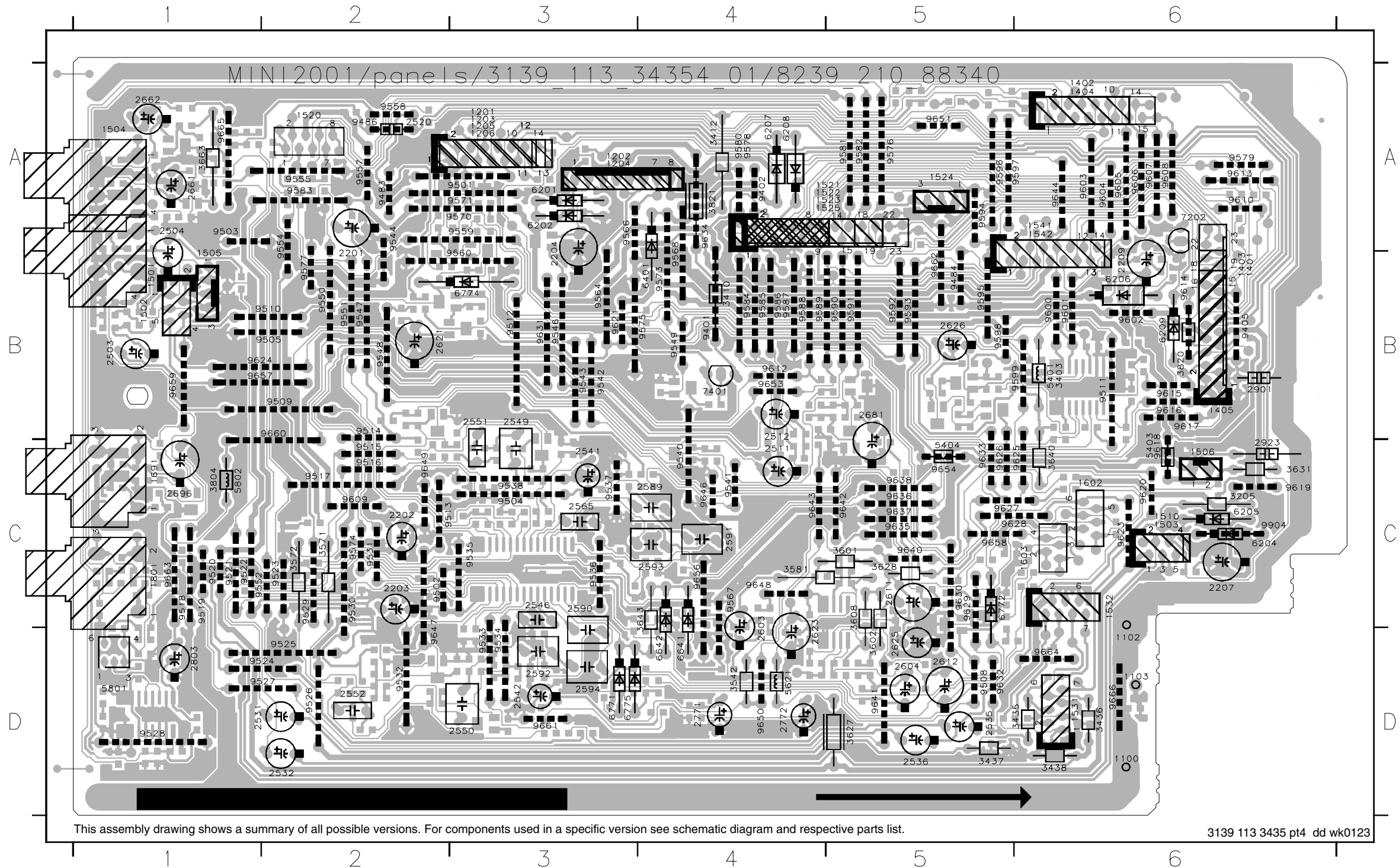
For Auto-reverse version only
 * If high frequencies are not within limits, decrease bias and re-measure.
 If distortion is too high, increase bias and re-measure
 ^ Not applicable for Ferro version



AF9 BOARD

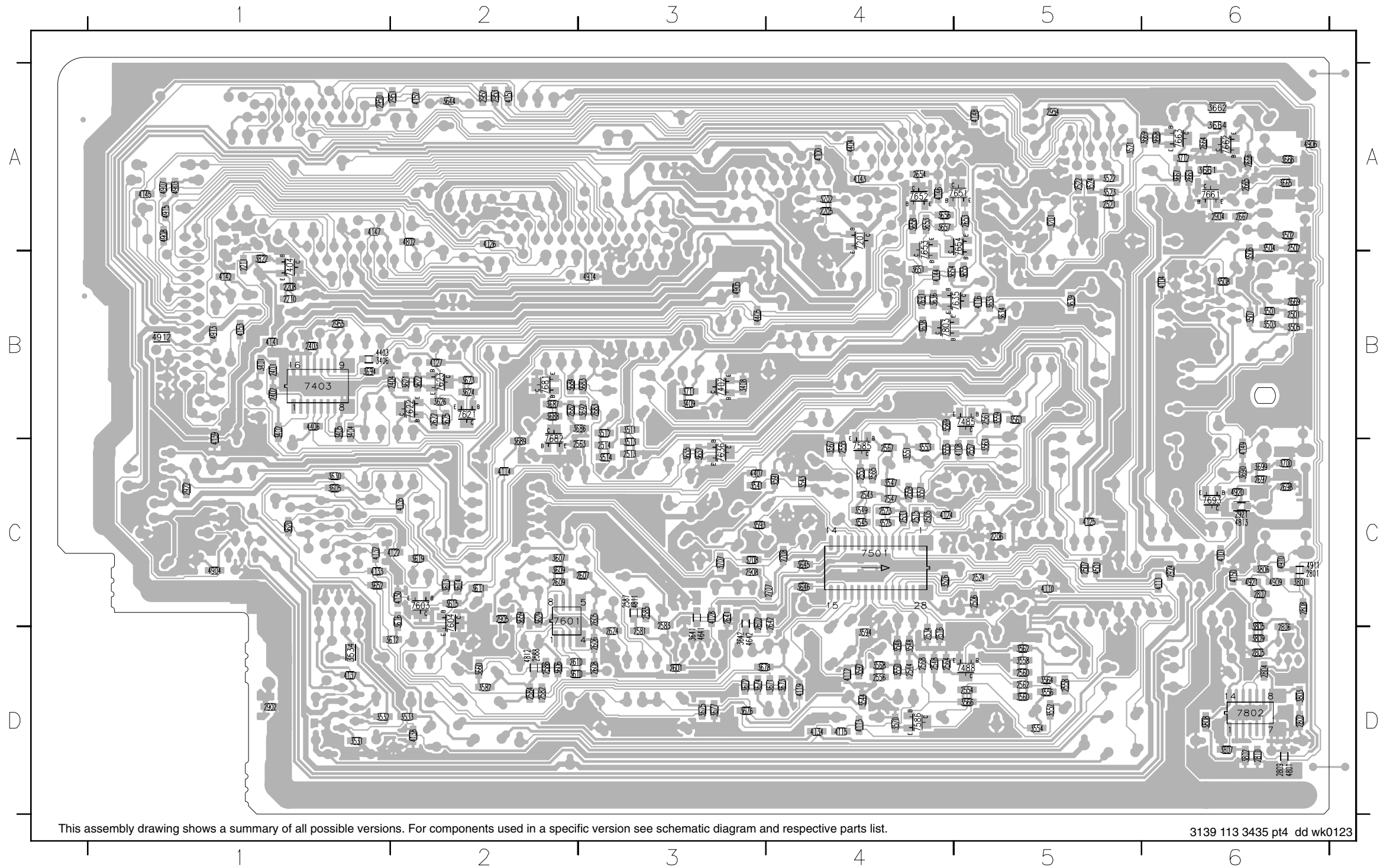
AF9 BOARD - COMPONENT LAYOUT

1100 D6	1503 C6	1603 C6	2535 D5	2603 D4	2923 C6	3627 D5	6202 A3	9401 B4	9513 C2	9529 C2	9547 B2	9570 A3	9587 B4	9603 A6	9620 C6	9637 C5	9657 B1
1102 D6	1504 A1	1691 C1	2536 D5	2604 D5	3205 C6	3628 C5	6204 C6	9402 A4	9514 B2	9530 C2	9548 B2	9571 A3	9588 B4	9604 A6	9621 B3	9638 C5	9658 C5
1103 D6	1505 B1	1801 C1	2541 C3	2611 C5	3403 B6	3631 C6	6205 C6	9405 B6	9515 C2	9531 C2	9549 B4	9573 B4	9589 B4	9605 A6	9623 C6	9640 C5	9659 B1
1201 A3	1506 C6	2201 B2	2542 D3	2612 D5	3410 B4	3640 C6	6206 B6	9483 A2	9516 C2	9532 D2	9550 B2	9574 C2	9590 B5	9606 A6	9624 B1	9641 D5	9660 B2
1202 A3	1510 C6	2202 C2	2546 C3	2621 B2	3412 A4	3643 C4	6207 A4	9484 B5	9517 C2	9533 D3	9551 B2	9575 B4	9591 B5	9607 A6	9625 C6	9642 C5	9661 D3
1203 A3	1520 A2	2203 C2	2549 B3	2623 D4	3435 D6	3663 A1	6208 A4	9486 A2	9518 C1	9534 D3	9552 C1	9576 A5	9592 B5	9608 A6	9626 C5	9643 C4	9662 B5
1204 A3	1521 A5	2204 B3	2550 D3	2625 D5	3436 D6	3804 C1	6209 B6	9501 A3	9519 C1	9535 C3	9554 A2	9577 B2	9593 B5	9609 C2	9627 C5	9644 A6	9663 C1
1205 A3	1522 A5	2207 C6	2551 B3	2626 B5	3437 D5	3820 B6	6401 B4	9502 C1	9520 C1	9536 C3	9555 A2	9578 A4	9594 A5	9610 A6	9628 C5	9646 C4	9664 D6
1206 A3	1523 A5	2209 B6	2552 D2	2661 A1	3438 D6	3821 A4	6641 D4	9503 A1	9521 C1	9537 C3	9557 A2	9579 A6	9595 B5	9612 B4	9629 C5	9647 D2	9665 A1
1401 B6	1524 A5	2503 B1	2565 C3	2662 A1	3542 D4	5401 B6	6642 D4	9504 C3	9522 C1	9538 C3	9558 A2	9580 A4	9596 A5	9613 A6	9630 C5	9648 C4	9666 D6
1402 A6	1525 A5	2504 A1	2589 C4	2681 B5	3571 C2	5403 C6	6771 D3	9505 B2	9523 C2	9540 C4	9559 A3	9581 A5	9597 A6	9614 B6	9631 B3	9649 C2	9904 C6
1403 B6	1531 D6	2511 C4	2590 C3	2696 C1	3572 C2	5404 C5	6772 C5	9508 D5	9524 D2	9541 C4	9560 B3	9582 A5	9598 B5	9615 B6	9632 D5	9650 D4	
1404 A6	1532 C6	2512 B4	2591 C4	2771 D4	3581 C4	5621 D4	6774 B3	9509 B2	9525 D2	9542 B3	9564 B3	9583 A2	9599 B6	9616 B6	9633 C5	9651 A5	
1405 B6	1541 A6	2520 A2	2592 D3	2772 D4	3601 C5	5801 D1	6775 D3	9510 B2	9526 D2	9543 B3	9566 A3	9584 B4	9600 B6	9617 B6	9634 A4	9653 B4	
1501 B1	1542 A6	2531 D1	2593 C4	2803 D1	3602 D5	5802 C1	7202 A6	9511 B6	9527 D2	9544 A2	9567 C4	9585 B4	9601 B6	9618 C6	9635 C5	9654 C5	
1502 B1	1602 C6	2532 D2	2594 D3	2901 B6	3608 C5	6201 A3	7401 B4	9512 B3	9528 D1	9546 B3	9568 B4	9586 B4	9602 B6	9619 C6	9636 C5	9656 C4	



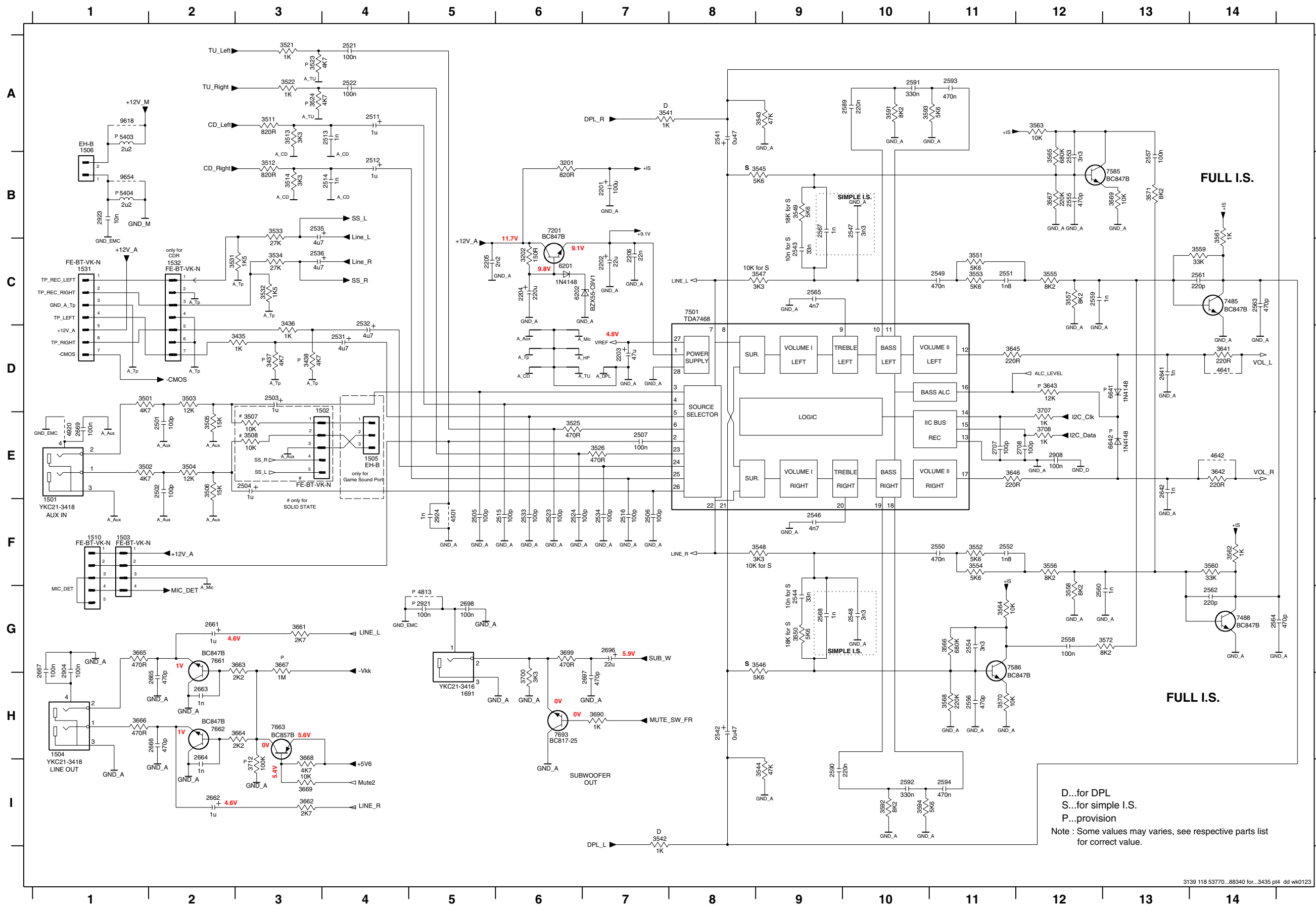
AF9 BOARD - CHIP LAYOUT

2205 A4	2523 C4	2567 C4	2641 C3	2805 D6	3202 A4	3521 A5	3552 D5	3591 C4	3624 B2	3654 B4	3676 D3	3803 D6	4124 C4	4148 A5	4904 C1	7501 C4	7693 C6
2206 C5	2524 C5	2568 D4	2642 C4	2806 D6	3401 B1	3522 A5	3553 C4	3592 D4	3625 B2	3655 B5	3677 D3	3805 C6	4125 C5	4149 C6	4905 B3	7585 C4	7802 D6
2208 B1	2533 C4	2581 D3	2653 A5	2807 C6	3402 B1	3523 A5	3554 D5	3593 C3	3626 B2	3656 A4	3678 D3	3806 C6	4126 A2	4150 C6	4906 A6	7586 D4	7803 B4
2210 B1	2534 D4	2582 D2	2654 A4	2808 C6	3404 B1	3524 A5	3555 C4	3594 D4	3629 C2	3657 A4	3683 B3	3807 D6	4127 B2	4151 A2	4907 A1	7601 C2	
2211 B1	2543 C4	2583 C3	2663 A6	2809 D6	3405 B1	3525 C4	3556 D5	3605 C1	3630 C1	3658 A4	3684 B2	3808 D6	4128 C3	4152 A2	4908 A1	7603 C2	
2401 B1	2544 D4	2584 D2	2664 A6	2810 D6	3406 B1	3526 C4	3557 C4	3606 D2	3633 B5	3659 C2	3686 B3	3809 D6	4130 C2	4153 B1	4909 C6	7604 C2	
2402 B1	2547 C4	2585 C3	2665 A6	2902 D1	3408 B3	3531 D1	3558 D5	3607 C2	3634 B5	3660 D2	3687 B2	3822 B1	4132 C1	4403 B1	4910 C6	7621 B2	
2403 B1	2548 D4	2586 D2	2666 A6	2904 A6	3409 B3	3532 D1	3559 B5	3609 C2	3635 C3	3661 A6	3688 B2	4100 A4	4133 C1	4404 A4	4911 C6	7622 B2	
2404 B2	2553 C4	2587 C3	2667 A6	2905 C2	3501 B6	3533 D2	3560 D5	3610 D2	3636 B4	3662 A6	3689 C2	4101 C6	4134 D4	4405 B3	4912 B1	7623 B2	
2501 B6	2554 D5	2588 D2	2669 B6	2908 C3	3502 A6	3534 D1	3561 B5	3611 C2	3637 C3	3664 A6	3690 C6	4104 B6	4135 C2	4406 B1	4913 B1	7635 B5	
2502 A6	2555 C4	2601 D3	2682 B2	2921 C6	3503 B6	3541 C3	3562 D5	3612 D2	3638 B4	3665 A6	3692 B3	4108 C5	4137 D1	4407 C3	4914 B3	7636 C3	
2505 C4	2556 D4	2602 C3	2683 B3	2922 C1	3504 A6	3543 C4	3563 C5	3613 C2	3639 B5	3666 A6	3694 B1	4110 C5	4138 D2	4501 C5	4915 A1	7651 A5	
2506 C5	2557 C5	2605 C3	2691 B4	2924 C6	3505 B6	3544 D4	3564 D5	3614 C2	3641 D3	3667 A6	3699 C6	4111 C6	4139 B1	4641 D3	4920 C6	7652 A4	
2507 C5	2558 D5	2606 D3	2697 C6	2950 A1	3506 B6	3545 C4	3565 C4	3615 C2	3642 D3	3668 A6	3700 C6	4112 D4	4141 B1	4642 D3	4921 C6	7653 A4	
2513 C3	2559 C4	2607 C3	2698 C6	2951 A2	3507 B6	3546 D4	3566 D5	3616 C2	3644 A2	3669 A6	3707 C3	4113 D4	4142 B1	4801 D6	7201 A4	7654 A5	
2514 C3	2560 D5	2608 D3	2707 C4	2952 A2	3508 B6	3547 C4	3567 C4	3619 C2	3645 C4	3671 D4	3708 C3	4114 C2	4143 A4	4802 A2	7402 B3	7661 A6	
2515 C4	2561 B5	2609 C2	2708 C4	2953 A2	3511 B3	3548 D4	3568 D4	3620 C1	3646 C4	3672 D3	3711 B3	4115 D4	4144 B4	4811 C3	7403 B1	7662 A6	
2516 D4	2562 D5	2610 D2	2801 C6	2954 A5	3512 B3	3549 D4	3569 B4	3621 B2	3651 B4	3673 D4	3712 A6	4116 B5	4145 A1	4812 D2	7404 B1	7663 A6	
2521 A5	2563 C3	2622 B2	2802 D6	2955 B1	3513 C3	3550 D4	3570 D4	3622 B2	3652 C1	3674 D3	3801 C6	4119 D4	4146 A4	4813 C6	7485 B5	7681 B2	
2522 A5	2564 D4	2624 D3	2804 D6	3201 A5	3514 C3	3551 C4	3582 D2	3623 B2	3653 A4	3675 D3	3802 D6	4122 C2	4147 A1	4903 A1	7488 D5	7682 B2	



This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram and respective parts list.

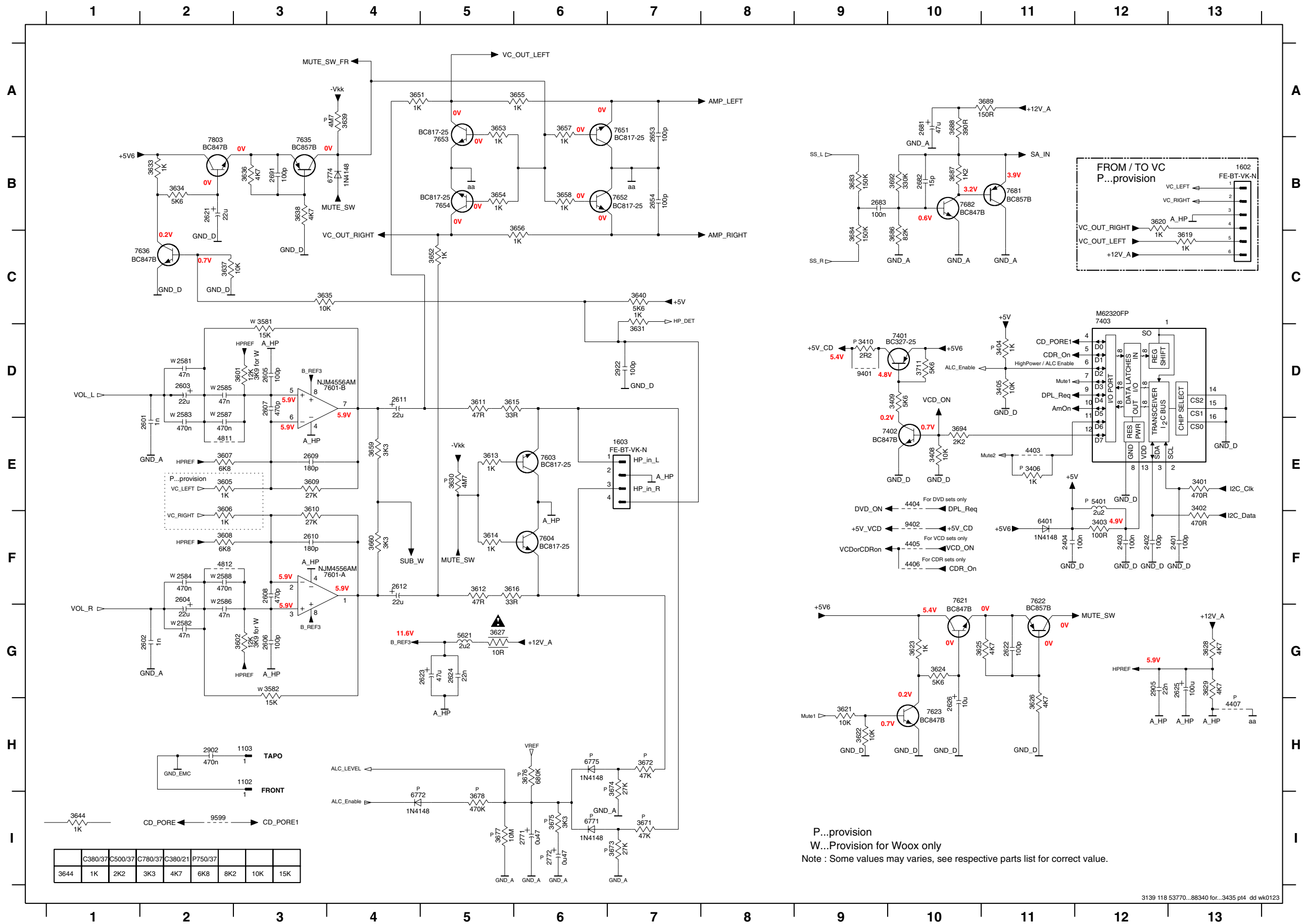
AF9 BOARD - CIRCUIT DIAGRAM (PART 1)



1501 E1	3511 A3
1502 E3	3512 B3
1503 F1	3513 A3
1504 H1	3514 B3
1505 E4	3521 A3
1506 A1	3522 A3
1510 F1	3523 A3
1531 C1	3524 A3
1532 C2	3525 E6
1691 H5	3526 E7
2201 B7	3531 C2
2202 C7	3532 C3
2203 D7	3533 B3
2204 C6	3534 C3
2205 C5	3541 A7
2206 C7	3542 I7
2501 E2	3543 A9
2502 E2	3544 I9
2503 D3	3545 B9
2504 E3	3546 G9
2505 F5	3547 C9
2506 F7	3548 F9
2507 E7	3549 B9
2511 A4	3550 G9
2512 B4	3551 C11
2513 A4	3552 F11
2514 B4	3553 C11
2515 F6	3554 F11
2516 F7	3555 C12
2521 A4	3556 F12
2522 A4	3557 C12
2523 F6	3558 G12
2524 F6	3559 C14
2531 D4	3560 F14
2532 C4	3561 B14
2533 F6	3562 F14
2534 F7	3563 A12
2535 B3	3564 G11
2536 C3	3565 B12
2541 A8	3566 G11
2542 H8	3567 B12
2543 G9	3568 H11
2544 C9	3569 B13
2546 F9	3570 H11
2547 B10	3571 B13
2548 G10	3572 G13
2549 C11	3591 A10
2550 F11	3592 I10
2551 C11	3593 A10
2552 F11	3594 I10
2553 B12	3641 D14
2554 G11	3642 E14
2555 B12	3643 D12
2556 H11	3645 D11
2557 B13	3646 E11
2558 G12	3661 G3
2559 C12	3662 I3
2560 G12	3663 G3
2561 C14	3664 H3
2562 G14	3665 G1
2563 C14	3666 H1
2564 G14	3667 G3
2565 C9	3668 I3
2567 B9	3669 I3
2568 G9	3690 H7
2589 A10	3699 G6
2590 I9	3700 H6
2591 A10	3707 E12
2592 I10	3708 E12
2593 A11	3712 I3
2594 I11	4501 F5
2641 D13	4641 D14
2642 E13	4642 E14
2661 G2	4813 G5
2662 I2	4920 E1
2663 H2	5403 A1
2664 I2	5404 B1
2665 H2	6201 C6
2666 H2	6202 C6
2667 G1	6641 D13
2669 E1	6642 E13
2696 G7	7201 B6
2697 H7	7488 C14
2698 G5	7489 G14
2707 E11	7501 C8
2708 E12	7585 B13
2904 G1	7586 G11
2908 E12	7661 G2
2921 G5	7662 H2
2923 B1	7663 H3
2924 F5	7693 H6
3201 B6	9618 A1
3202 C6	9654 B1
3435 D3	
3436 D3	
3437 D3	
3438 D3	
3501 D1	
3502 E1	
3503 D2	
3504 E2	
3505 E2	
3506 E2	
3507 E3	
3508 E3	

D...for DPL
 S...for simple I.S.
 P...provision
 Note : Some values may varies, see respective parts list for correct value.

AF9 BOARD - CIRCUIT DIAGRAM (PART 2)

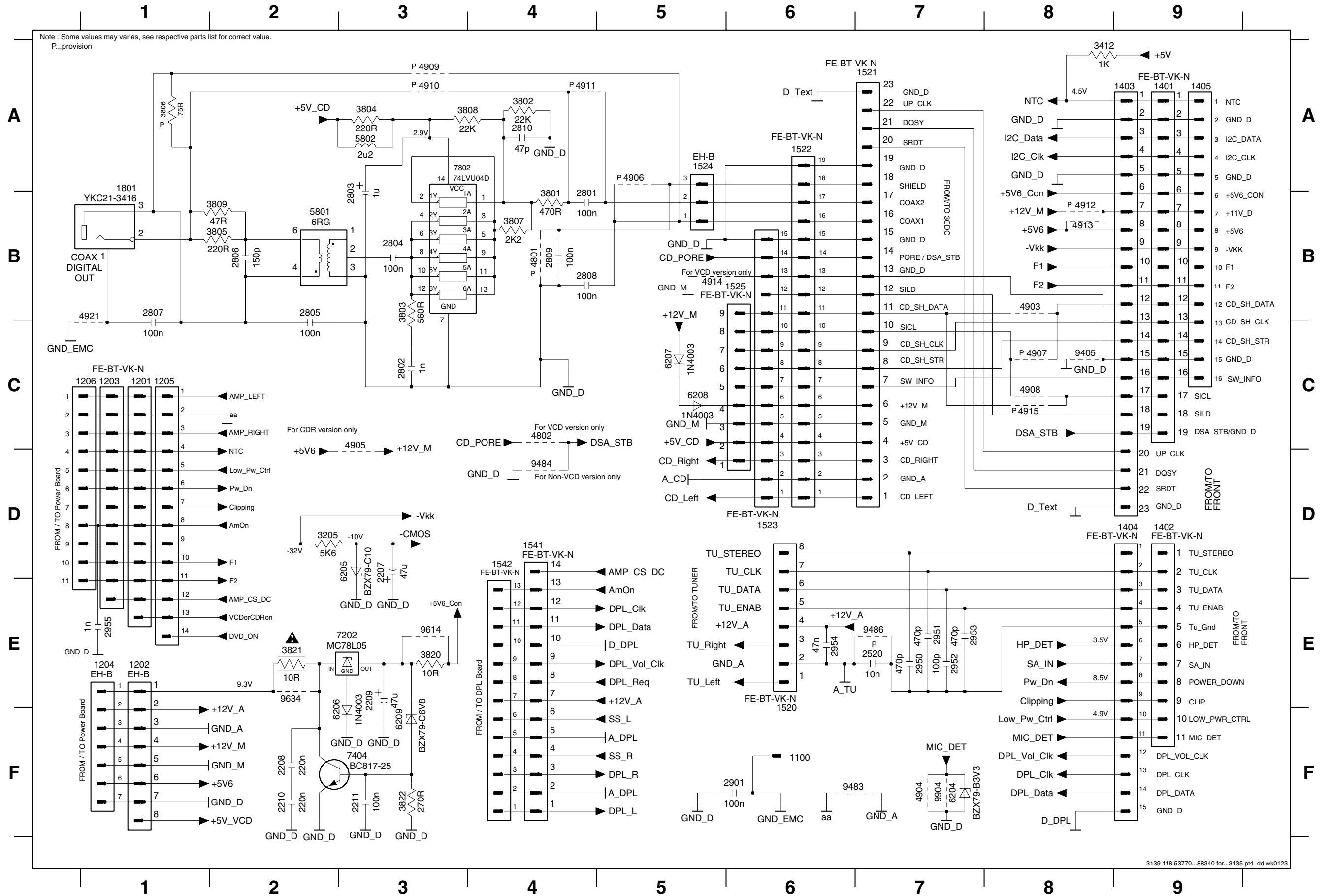


- 1102 H3
- 1103 H3
- 1602 B13
- 1603 E7
- 2401 F13
- 2402 F12
- 2403 F12
- 2404 F11
- 2581 D2
- 2582 G2
- 2583 D2
- 2584 F2
- 2585 D2
- 2586 F2
- 2587 D2
- 2588 F2
- 2601 E2
- 2602 G2
- 2603 D2
- 2604 F2
- 2605 D3
- 2606 G3
- 2607 D3
- 2608 F3
- 2609 E3
- 2610 F3
- 2611 D4
- 2612 F4
- 2621 B2
- 2622 G11
- 2623 G5
- 2624 G5
- 2625 G13
- 2626 H10
- 2653 A7
- 2654 B7
- 2681 A10
- 2682 B10
- 2683 B9
- 2691 B3
- 2771 I6
- 2772 I6
- 2902 H2
- 2905 G12
- 2922 D7
- 3401 E13
- 3402 E13
- 3403 F12
- 3404 D11
- 3405 D11
- 3406 E11
- 3408 E10
- 3409 D10
- 3410 D9
- 3581 D3
- 3582 G3
- 3601 D3
- 3602 G3
- 3605 E2
- 3606 F2
- 3607 E2
- 3608 F2
- 3609 E3
- 3610 F3
- 3611 D5
- 3612 F5
- 3613 E5
- 3614 F5
- 3615 D5
- 3616 F5
- 3619 C13
- 3620 B12
- 3621 H9
- 3622 H9
- 3623 G10
- 3624 G10
- 3625 G10
- 3626 H11
- 3627 G5
- 3628 G13
- 3629 G13
- 3630 E5
- 3631 D7
- 3633 B2
- 3634 B2
- 3635 C3
- 3636 B3
- 3637 C2
- 3638 B3
- 3639 A4
- 3640 C7
- 3644 I1
- 3651 A4
- 3652 C5
- 3653 A5
- 3654 B5
- 3655 A6
- 3656 C6
- 3657 A6
- 3658 B6
- 3659 E4
- 3660 F4
- 3671 I7
- 3672 H7
- 3673 I7
- 3674 H7
- 3675 I6
- 3676 H6
- 3677 I5
- 3678 I5
- 3683 B9
- 3684 C9
- 3686 C10
- 3687 B10
- 3688 A10
- 3689 A11
- 3692 B10
- 3694 E10
- 3711 D10
- 4403 E11
- 4404 E10
- 4405 F10
- 4406 F10
- 4407 H13
- 4811 E2
- 4812 F2
- 5401 E12
- 5621 G5
- 6401 F11
- 6771 I6
- 6772 I4
- 6774 B4
- 6775 H6
- 7401 D10
- 7402 E10
- 7403 C12
- 7601-A G3
- 7601-B D3
- 7603 E6
- 7604 F6
- 7621 F10
- 7622 F11
- 7623 H10
- 7635 B3
- 7636 C2
- 7651 A7
- 7652 B7
- 7653 B5
- 7654 B5
- 7681 B11
- 7682 B10
- 7803 B2
- 9401 D9
- 9402 F10
- 9599 I2

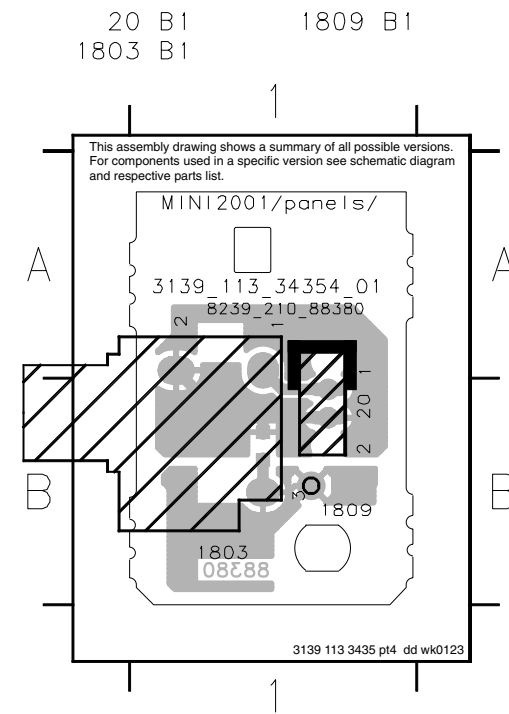
P...provision
W...Provision for Woox only
Note : Some values may varies, see respective parts list for correct value.

AF9 BOARD - CIRCUIT DIAGRAM (PART 3)

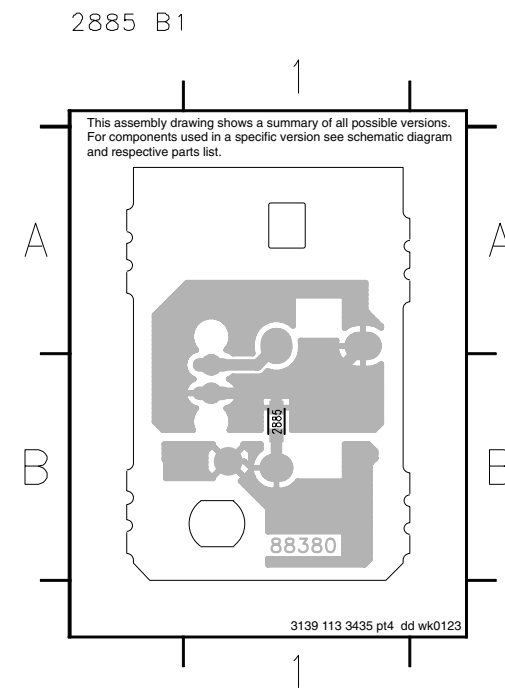
1100 F6	1203 C1	1206 C1	1403 A9	1520 E6	1523 D6	1541 D4	2207 D3	2210 F2	2801 B4	2804 B3	2807 B1	2810 A4	2951 E7	2954 E6	3412 A8	3803 B3	3806 A1	3809 B2	3822 F3	4903 B8	4906 A5	4909 A3	4912 B8	4915 C8	5802 A3	6206 F3	6209 F3	7802 A3	9484 D4	9634 E2
1201 C1	1204 E1	1401 A9	1404 D9	1521 A7	1524 A5	1542 D4	2208 F2	2211 F3	2802 C3	2805 B2	2808 B4	2901 F6	2952 E7	2955 E1	3801 B4	3804 A3	3807 B4	3820 E3	4801 B4	4904 F7	4907 C8	4910 A3	4913 B8	4921 B1	6204 F7	6207 C5	7202 E3	9405 C8	9486 E7	9904 F7
1202 E1	1205 C1	1402 D9	1405 A9	1522 A6	1525 B5	1801 A1	2209 E3	2520 E7	2803 B3	2806 B2	2809 B4	2950 E7	2953 E7	3205 D2	3802 A4	3805 B2	3808 A3	3821 E2	4802 C4	4905 C3	4908 C8	4911 A4	4914 B5	5801 B2	6205 D3	6208 C5	7404 F3	9483 F6	9614 E3	



**VIDEO OUT CINCH BOARD -
COMPONENT LAYOUT**



**VIDEO OUT CINCH BOARD -
CHIP LAYOUT**



VIDEO OUT CINCH PART - CIRCUIT DIAGRAM

