

Service Service Service

Product Service Group CE Audio

Service Information

Already published Service Informations:

CORRECTION TO SERVICE MANUAL

* FW-D5 Mechanical & Accessories parts list

0110	3139 118 11050	Cover Ornament CDC
0144	3139 118 11220	Ring Ornamental Jog Sound
0259	3139 114 73480	Cabinet Rear /21/21M/22/30
0350	3139 118 78110	L/R L.S. Box /21/21M/22/30
0388	2422 076 00348	Scart cable 1,5M /22 only

* FW-D1/21M Mechanical & Accessories parts list

0110	3139 118 11050	Cover Ornament CDC
0144	3139 118 11220	Ring Ornamental Jog Sound
0259	3139 114 73480	Cabinet Rear
1683	3139 110 34920	Flex Cable 8pin 28cm BD

Below are corrections to the circuit diagram & parts list:

* AV Board

2831	4822 126 14491	2,2µF +80/-20% 10V
2876	4822 124 81151	22µF 20% 50V
2927	Delete	
2933	Delete	
2979	5322 122 33861	120pF 50V
3760	4822 051 20472	4k7 5% 0,1W
3791	4822 051 10102	1k 2% 0,25W
3827 - 3829	4822 117 11503	220R 1% 0,1W
3954 - 3955	4822 117 11503	220R 1% 0,1W
4408	Delete	
4658	Delete	
4674	Delete	
4710 - 4712	Delete	
4722 - 4723	Delete	
4912	Delete	
4969	4822 051 20008	0R Jumper 0805

* Front Board (applicable for FW-D1/21M only)

1472	Delete
4421	Delete
4910	Should not be deleted

* AV Board (applicable for FW-D1/21M only)

4910	Should not be deleted
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CHANGES DURING PRODUCTION

*From production wk039 onwards the following was introduced to ease assembly process.

1685	3139 110 35050	Flex Cable 8pin 22cm AD
1685	3139 110 34940	Flex Cable 12pin 22cm AD
1691	3139 110 34690	Flex Cable 9pin 34cm BD

* During production new ASD-1 DVD module is introduced due to the shortage of present JBE DVD Module. The following are adapted to cater for this new module:

0160	3139 118 14290	Cover Tray DVD ASD-1
0203	3139 241 20010	Bracket EMC
0317	3139 111 29630	Shield EMC DVD ASD-1
0318	3139 111 01420	Spring DVD ASD-1
5002	4322 020 90862	Toroid Ring

Introduction dates:

- Non-Karaoke versions introduced from wk043 onwards
- Karaoke versions introduced from wk101 onwards together with new DAC board.

For repair on this module, refer to Service Document: DVD Module ASD-1 3122 785 10840

Enclosed is an updated Exploded view drawing of the Main Unit.

AV BOARD

* From production wk039 onwards the following is introduced to adjust the Sub-woofer output to 1.4V

3726 change to 15k 5% 0,1W	4822 116 83933
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* From production wk039 onwards the following was introduced to reduce volume rotating plop at Sub-woofer out.

2734 change to 1µF 20% 50V	4822 124 21913
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* From production wk039 onwards a new pt. 2 board (recognized by the last digit34302 printed on the board) is introduced to improve Emission power and spectrum analyzer not responding in CDR mode.

Add	2950	4822 126 13751	47nF 50V
	3969	4822 117 10833	10k 5% 0,1W
	4910	4822 051 20008	0R Jumper 0805
	4970	4822 051 20008	0R Jumper 0805
	4971	4822 051 20008	0R Jumper 0805
	5613	4822 157 62552	Coil 2,2μH 5%

* From production wk048 a new pt. 3 board (recognized by the last digit34303 printed on the board) is introduced to solve:

- output intermittent when connected to wireless headphone
- subwoofer output not increasing proportionally with respect to Left/Right output when volume control is adjusted.

Add	2991	4822 124 81151	22μF 20% 50V
	3654	4822 051 20392	3k9 5% 0,1W
	3655	4822 051 20392	3k9 5% 0,1W
	3994	4822 117 10833	10k 5% 0,1W
	3995	4822 117 10833	10k 5% 0,1W
	4973	4822 051 20008	0R Jumper 0805
	4974	4822 051 20008	0R Jumper 0805

New circuit and layout diagrams are enclosed.

FRONT BOARD

*From production wk039 onwards the following was introduced to reduce emission power.

Delete	2925	(Replaced by 4913)
Add	2818	4822 126 14585 100nF 16V
	4913	4822 051 20008 0R Jumper 0805

*From production wk039 onwards a new pt. 2 board (recognized by the last digit34312 printed on the board) is introduced to improve Emission power.

Add	2819	4822 126 14585	100nF 16V
	2948	4822 122 33177	10nF 50V
	2949	4822 122 33177	10nF 50V
	5903	4822 157 10586	Coil 2,2μH 10%
	5904	4822 157 10586	Coil 2,2μH 10%
	5905	4822 157 62552	Coil 2,2μH 5%
	5906	4822 157 10586	Coil 2,2μH 10%
	9907	Bare wire	

New circuits and layouts of the Mic & Open/Close board and DAC board are enclosed.

*From production wk039 onwards the μProcessor IC 7441 is upgraded to ver 27 with print mark: "D51S52621" to solve:

- Enable Service Key Test
- Solve Karaoke problem
- /34 autoprogram problem
- DVD errors such as surround modes & speakers, etc.

Change 7441 3139 110 52621 TMP88CU77F ver. 27

* From production wk101 the DAC breakaway part (board) will be replaced by a new DAC Board.
(See below for details)

DAC BOARD (NEW)

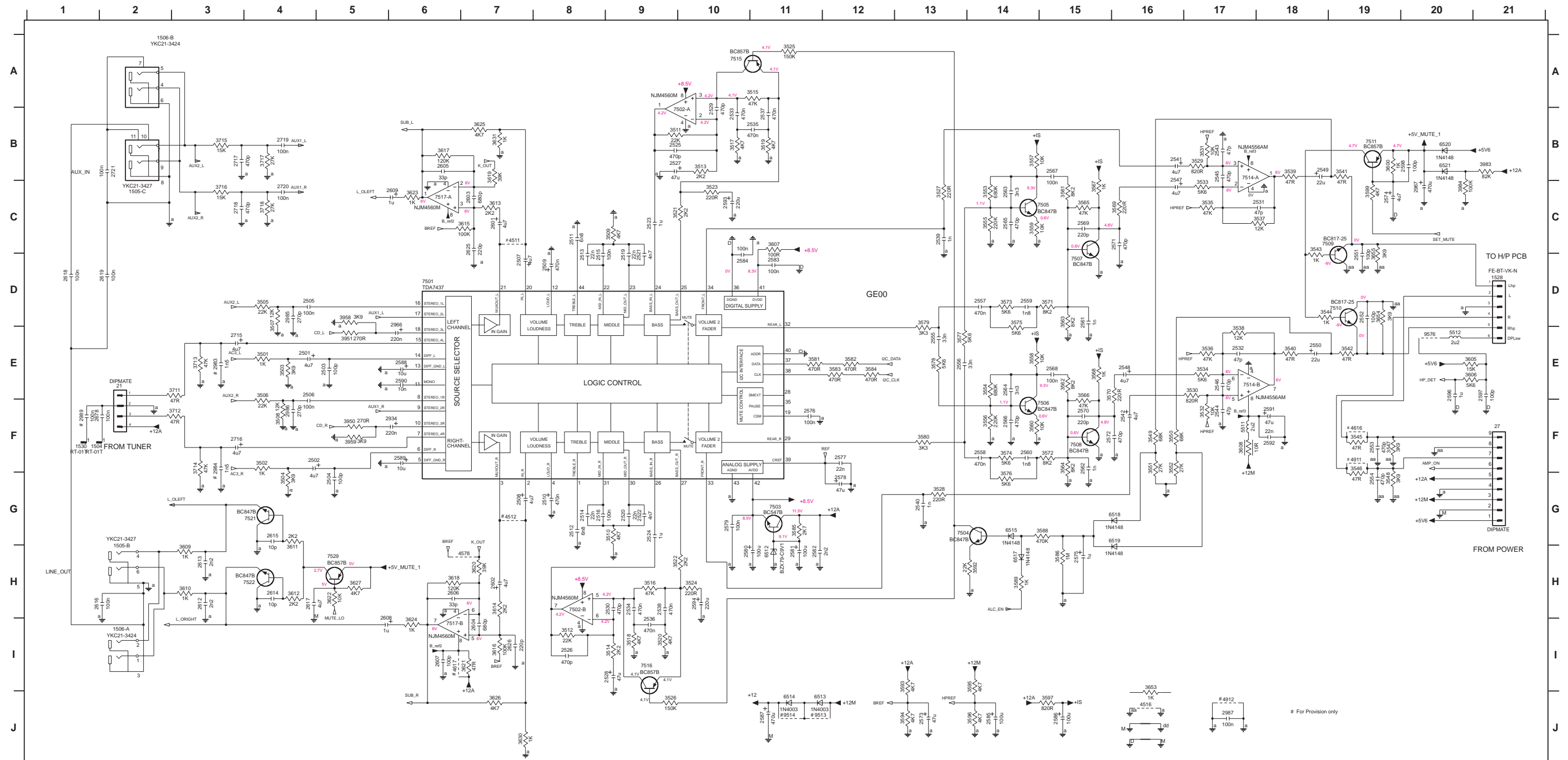
* From production wk101 a new DAC board is introduced (recognized by the last digit 34451 printed on the board) to for the following when introducing the ASD-1 Module:

- solve Left/Right interchange in FW-D1 family
- addition of IC 7933 to boost the signals level from the ASD-1 Module to IC7931 - for Karaoke versions

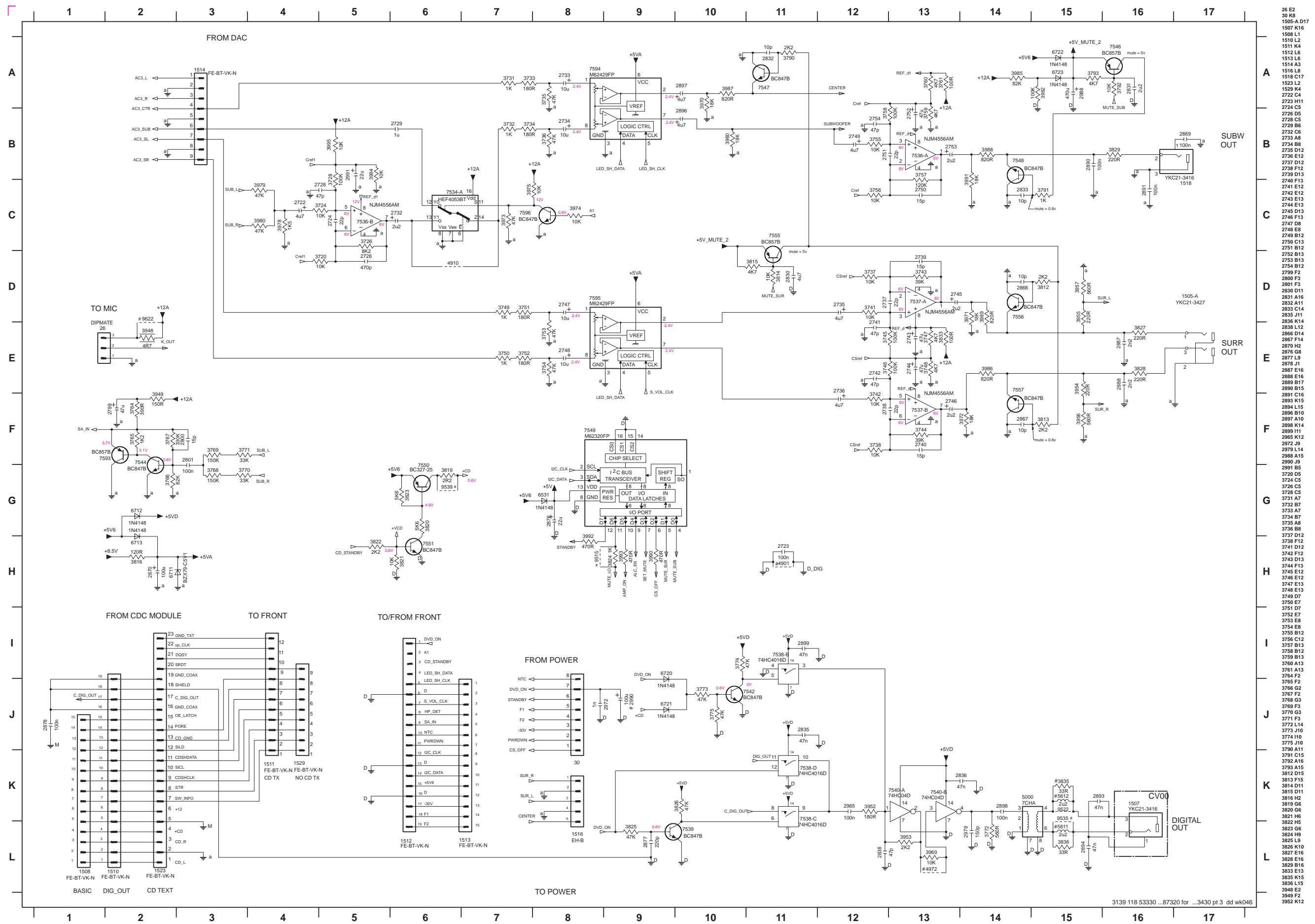
New parts list, circuit and layout diagrams are enclosed.

AV BOARD - CIRCUIT DIAGRAM (PART 1)

21 E2	2501 E4	2510 G8	2521 D9	2530 H9	2539 C13	2548 E16	2557 D14	2566 F14	2575 H15	2584 D10	2593 C10	2605 B6	2616 H1	2717 B3	2984 F3	3505 D4	3514 I9	3523 C10	3532 F17	3541 B19	3550 F16	3559 C14	3568 E15	3577 E13	3586 H15	3599 C19	3612 H4	3621 I7	3633 H6	3717 B4	4512 G7	6512 H11	7501 D6	7509 C18	7521 G4
27 F21	2502 F4	2511 C8	2522 G9	2531 C18	2540 G13	2549 B18	2558 F14	2567 B15	2576 F11	2585 J14	2594 H10	2606 H6	2617 H4	2718 C3	2985 D4	3506 E4	3515 A11	3524 H10	3533 C17	3542 E19	3551 F16	3560 F14	3569 C16	3578 E13	3588 G15	3600 B19	3613 C7	3622 H5	3634 D19	3718 C4	4516 J16	6513 J11	7502-A B10	7510 D19	7522 H4
1504 F1	2503 E5	2512 G8	2523 C9	2532 E17	2541 B16	2550 E18	2559 D14	2568 E15	2577 F12	2586-I15	2596 E20	2607 E6	2618 D1	2719 B4	2986 F4	3507 D4	3516 H9	3525 J9	3534 E17	3543 C18	3552 F16	3561 C15	3570 E15	3579 D13	3589 H14	3605 E20	3614 H7	3623 C8	3635 D19	3719 C5	4518 H7	6514 J11	7503-B H8	7511 B19	7523 H5
1505-B G2	2504 G5	2513 D8	2524 G9	2533 B10	2542 F16	2551 D19	2560 F14	2569 C15	2578 G12	2587 J11	2597 E21	2608 I5	2619 D2	2720 C4	2987 J17	3508 F4	3517 B10	3526 J9	3535 C17	3544 D18	3553 C14	3562 E15	3571 D15	3580 F13	3592 H14	3606 E20	3615 C7	3624 I6	3711 E3	3951 E5	4616 F19	6515 G14	7503 G11	7514-A B17	9513 J11
1505-C G2	2505 D4	2514 G8	2525 B9	2534 H9	2543 B17	2552 D19	2561 D15	2570 F15	2579 G10	2588 E6	2598 E20	2609 C6	2620 C7	2721 B2	2989 F1	3509 C9	3518 I9	3527 C13	3536 E17	3545 F19	3554 E14	3563 D19	3572 F15	3581 H3	3593 H3	3607 C11	3616 I7	3625 B7	3712 F3	3958 D5	4617 I8	6517 H14	7504 G14	7514-B E17	9514 J11
1506-A H2	2506 E4	2515 D8	2526 I8	2535 B11	2544 F17	2553 F19	2562 F15	2571 C16	2580 H10	2589 F6	2599 F6	2612 H3	2626 I7	2834 F6	3501 E4	3510 G9	3519 B11	3528 G13	3537 C18	3546 F19	3555 C14	3564 F19	3573 D14	3582 E12	3594-I14	3608 F17	3617 B6	3626 J7	3713 E3	3959 F5	4911 F19	6518 G16	7505 C14	7515 A10	9515 E20
1506-A2	2507 D7	2516 G8	2527 B9	2536 I9	2545 B17	2554 G19	2563 C14	2572 F15	2581 H11	2590 E6	2602 H7	2613 H3	2628 F1	2966 E6	3502 F4	3511 B9	3520 I9	3529 B17	3538 E17	3547 F19	3556 F14	3565 C15	3574 F14	3583 E12	3595-I14	3609 H3	3618 H6	3627 H5	3714 F3	3963 B21	4912 J17	6519 G16	7506 F14	7516 I9	9516 A-C5
1506-B A2	2508 D7	2519 D9	2528 I9	2537 B11	2546 E17	2555 E13	2564 E14	2573 J13	2582 H11	2591 F18	2603 C7	2614 H4	2715 E3	2987 C20	3503 E4	3512 I8	3521 C9	3530 E17	3539 B18	3548 F19	3557 B14	3566 E19	3575 G14	3584 E12	3596-I14	3610 H3	3619 B7	3630 J7	3715 B3	3964 C20	5911 F17	6520 B20	7507 D15	7517-A C5	
1530 F1	2509 D8	2520 G9	2529 B10	2538 H9	2547 C16	2556 E13	2565 C14	2574 C19	2583 D11	2592 F18	2604 I7	2615 G4	2716 F3	2983 E3	3504 G4	3513 B10	3522 H9	3531 B17	3540 F16	3549 F16	3558 E14	3567 C15	3576 G14	3585 G11	3597-I15	3611 G4	3620 H7	3631 B7	3716 C3	4511 C7	5912 E20	6521 B20	7508 F15	7517-B I7	



AV BOARD - CIRCUIT DIAGRAM (PART 2)



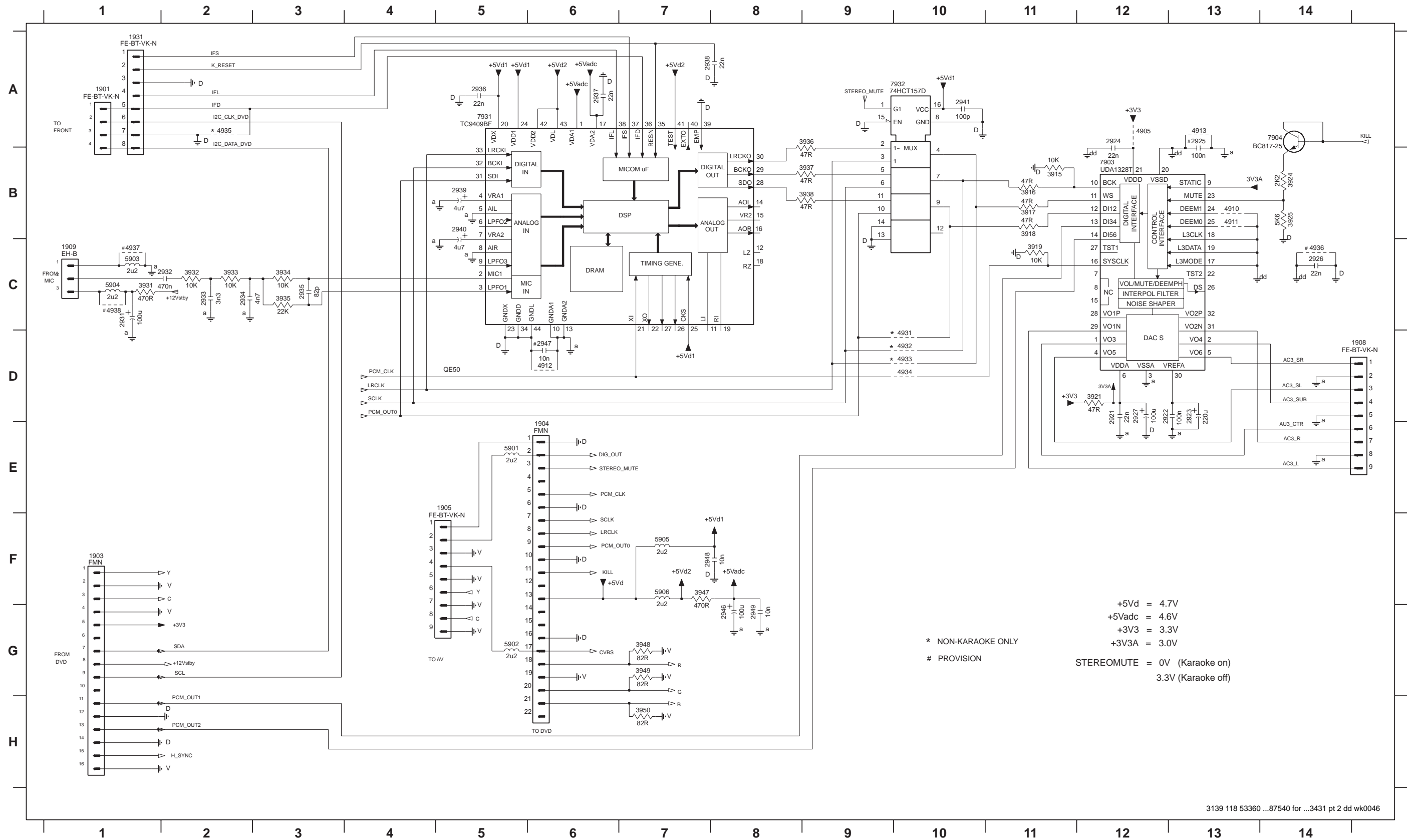
- 26 E2
- 1505-A D17
- 1507 K16
- 1508 L1
- 1510 L2
- 1511 K4
- 1512 L6
- 1513 L6
- 1514 A3
- 1516 L8
- 1518 C17
- 1523 L2
- 1529 K4
- 2722 C4
- 2723 H11
- 2724 C5
- 2726 D5
- 2728 C5
- 2729 B6
- 2732 C6
- 2733 A8
- 2734 B8
- 2735 D12
- 2736 E12
- 2737 D12
- 2738 F12
- 2739 D13
- 2740 F13
- 2741 E12
- 2742 E12
- 2743 E13
- 2744 E13
- 2745 D13
- 2746 F13
- 2747 D8
- 2748 E8
- 2749 B12
- 2750 C13
- 2751 B12
- 2752 B13
- 2753 B13
- 2754 B12
- 2759 F2
- 2800 F3
- 2801 F3
- 2830 D11
- 2831 A16
- 2832 A11
- 2833 C14
- 2835 J11
- 2836 K14
- 2838 L12
- 2866 D14
- 2867 A11
- 2870 H2
- 2876 G8
- 2877 L9
- 2878 J1
- 2887 E16
- 2888 E16
- 2889 B17
- 2890 B17
- 2891 C16
- 2893 K15
- 2894 L15
- 2896 B10
- 2897 A10
- 2898 K14
- 2899 I11
- 2965 K12
- 2972 J9
- 2979 L14
- 2988 A15
- 2990 J9
- 2991 B5
- 3720 D5
- 3724 C5
- 3726 C5
- 3728 C5
- 3731 A7
- 3732 B7
- 3733 A7
- 3734 B7
- 3735 A8
- 3736 B8
- 3737 D12
- 3738 F12
- 3741 D12
- 3742 F12
- 3743 D13
- 3744 F13
- 3745 E12
- 3746 E12
- 3747 E13
- 3748 E13
- 3749 D7
- 3750 E7
- 3751 D7
- 3752 E7
- 3753 E8
- 3754 E8
- 3755 B12
- 3756 C12
- 3757 B13
- 3758 B12
- 3759 B13
- 3760 A13
- 3761 A13
- 3764 F2
- 3765 F2
- 3766 G2
- 3768 G3
- 3769 F3
- 3770 G3
- 3771 F3
- 3772 L14
- 3773 J10
- 3774 J10
- 3775 J10
- 3790 A11
- 3791 C15
- 3792 A16
- 3793 A15
- 3812 D15
- 3813 F15
- 3814 D11
- 3815 D11
- 3816 H2
- 3819 G6
- 3820 G6
- 3821 H6
- 3822 H5
- 3823 G6
- 3824 H6
- 3825 L9
- 3826 K10
- 3827 E16
- 3828 E16
- 3829 B16
- 3833 E13
- 3835 K15
- 3836 L15
- 3948 E2
- 3949 F2
- 3952 K12
- 3953 L13
- 3954 E15
- 3955 D15
- 3956 F15
- 3957 D15
- 3960 B10
- 3969 L13
- 3970 A10
- 3971 D14
- 3972 F14
- 3973 C7
- 3974 C8
- 3980 C4
- 3982 A15
- 3985 A14
- 3986 E14
- 3987 A10
- 3988 B14
- 3989 D14
- 3990 H9
- 3991 C14
- 3992 H8
- 3993 H9
- 3994 B5
- 3995 B5
- 4904 H11
- 4910 D6
- 4972 L13
- 5000 K14
- 5611 L15
- 5612 K15
- 6531 G8
- 6711 H2
- 6712 J9
- 6713 H2
- 6722 A15
- 6723 A15
- 7534-A C6
- 7534-A B13
- 7536-B C5
- 7537-A D13
- 7537-B F13
- 7538-C K11
- 7538-D K11
- 7539 L10
- 7540-A K12
- 7540-B K13
- 7542 J10
- 7544 F2
- 7546 A16
- 7547 A11
- 7548 B14
- 7549 F9
- 7550 G6
- 7551 H6
- 7555 C11
- 7556 D14
- 7557 E14
- 7593 F2
- 7594 A8
- 7595 D8
- 7596 C7
- 7598 K14
- 7599 I11
- 9535 K15
- 9539 G6
- 9622 D2

FRONT BOARD - DAC PART

(Not for Karaoke version with ASD-1 Module application)

CIRCUIT DIAGRAM

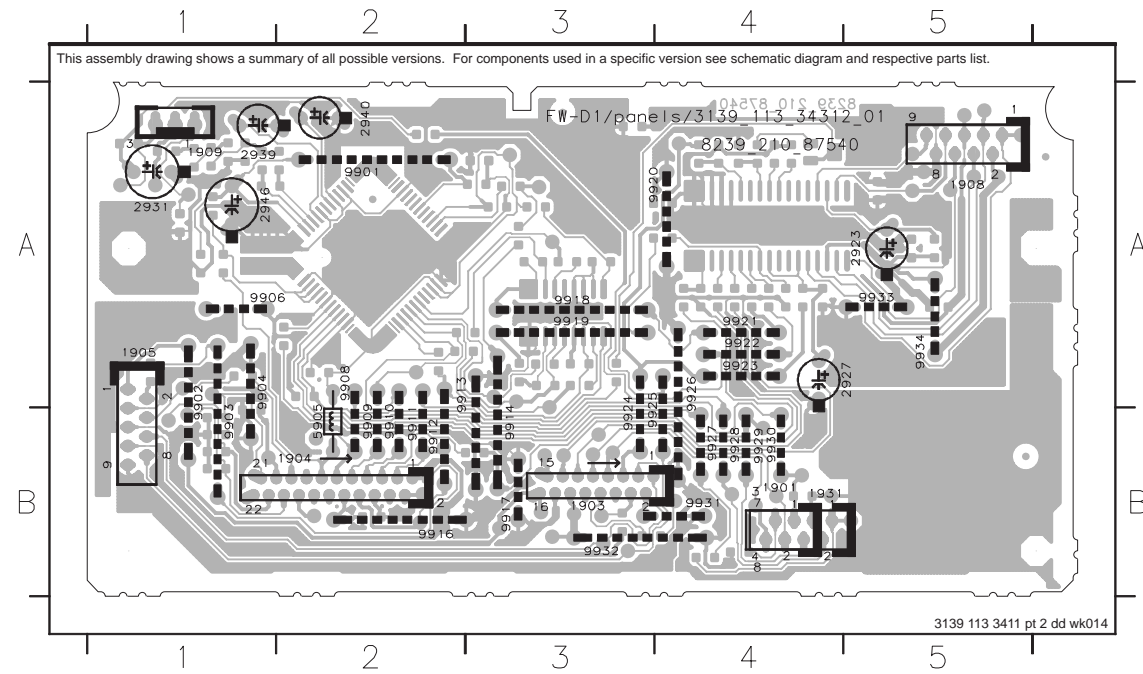
1901 A1 1905 E5 1931 A1 2923 D13 2926 C14 2932 C2 2935 C3 2938 A7 2941 A10 2948 F7 3916 B11 3919 C11 3925 B14 3933 C2 3936 A9 3947 F7 3950 H7 4911 B13 4931 D10 4934 D10 4937 C1 5902 G5 5905 F7 7904 A14
 1903 F1 1908 D14 2921 D12 2924 A12 2927 D12 2933 C2 2936 A5 2939 B5 2946 G8 2949 G8 3917 B11 3921 D12 3931 C1 3934 C3 3937 B9 3948 G7 4905 A12 4912 D6 4932 D10 4935 A2 4938 C1 5903 C1 5906 F7 7931 A5
 1904 E6 1909 C1 2922 D12 2925 A13 2931 C1 2934 C2 2937 A6 2940 B5 2947 D6 3918 B11 3924 B14 3932 C2 3935 C3 3938 B9 3949 G7 4910 B13 4913 A13 4933 D10 4936 C14 5901 E5 5904 C1 7903 B12 7932 A9



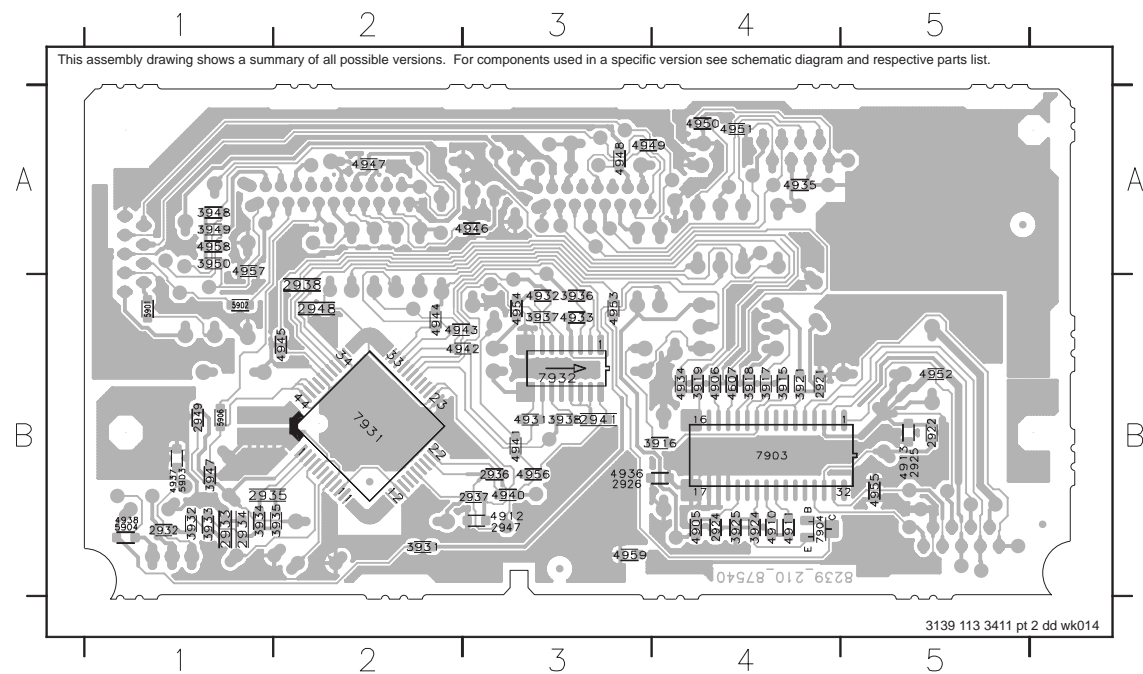
FRONT BOARD - DAC PART
 (Not for Karaoke version with ASD-1 Module application)

DAC BOARD - COMPONENT & CHIP LAYOUTS

1901	B4	1909	A1	2939	A1	9902	A1	9909	B2	9914	B3	9920	A3	9925	B3	9930	B4
1903	B3	1931	A1	2940	A2	9903	A1	9910	B2	9916	B2	9921	A4	9927	A4	9931	B4
1904	B2	2932	A1	2946	A1	9904	A1	9911	B2	9917	A3	9922	A4	9928	B4	9932	A5
1905	A1	2933	A1	5905	B2	9905	A1	9912	B2	9918	A3	9923	A4	9929	B4	9933	A5
1908	A5	2931	A1	9901	A2	9906	A2	9913	A2	9919	A3	9924	B3	9930	B4	9934	A5

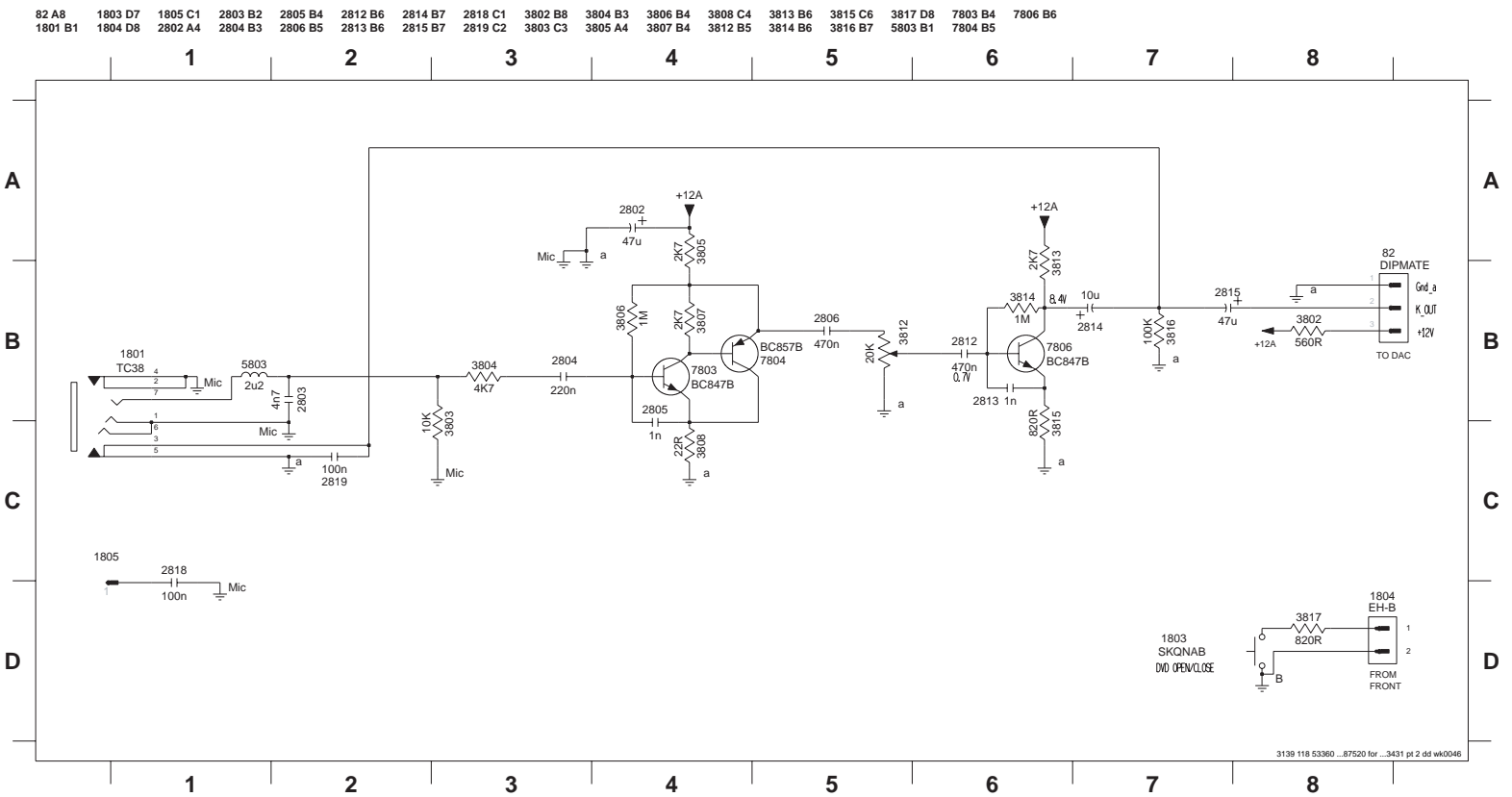


2921	B4	2929	A1	4939	A1	9902	A1	9909	B2	9914	B3	9920	A3	9925	B3	9930	B4
2923	B3	2931	A1	4940	A2	9903	A1	9910	B2	9916	B2	9921	A4	9927	A4	9931	B4
2924	B2	2932	A1	4946	A1	9904	A1	9911	B2	9917	A3	9922	A4	9928	B4	9932	A5
2925	A1	2933	A1	5905	B2	9905	A1	9912	B2	9918	A3	9923	A4	9929	B4	9933	A5
2926	B4	2931	A1	9901	A2	9906	A2	9913	A2	9919	A3	9924	B3	9930	B4	9934	A5



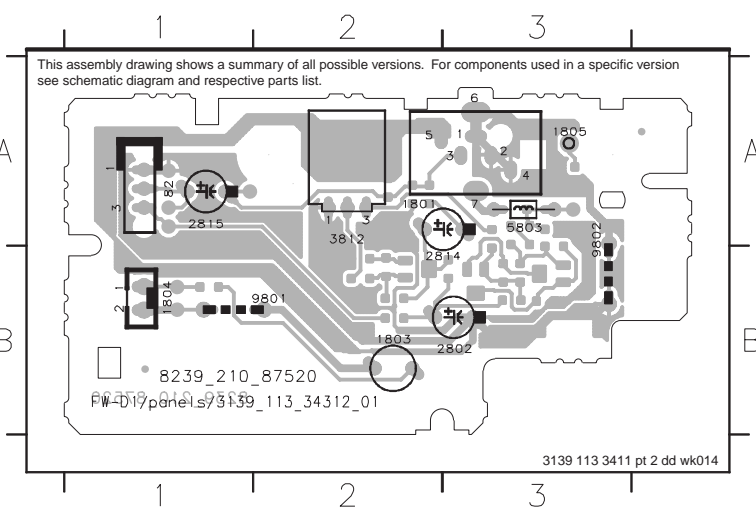
FRONT BOARD - MIC & OPEN/CLOSE PART

MIC & OPEN/CLOSE PART - CIRCUIT DIAGRAM

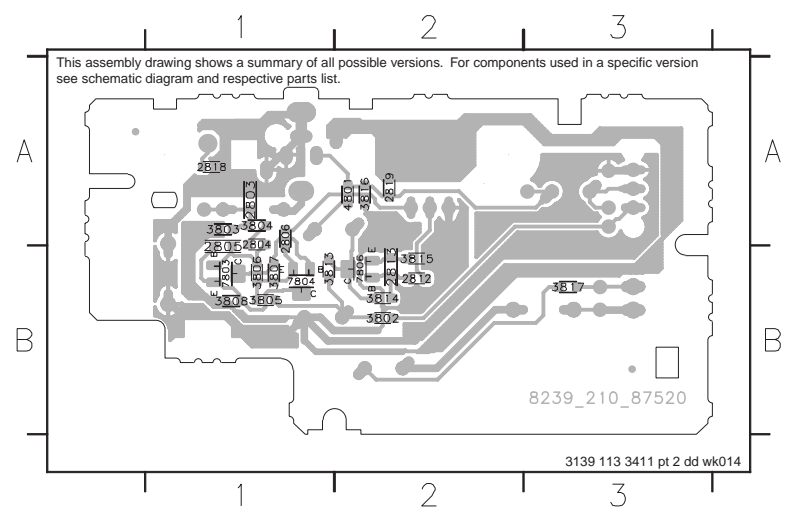


MIC & OPEN/CLOSE BOARD - COMPONENT & CHIP LAYOUTS

82 A1	1803 B2	1805 A3	2814 B3	3812 A2	9801 B2
1801 A2	1804 B1	2802 B3	2815 A1	5803 A3	9802 A3

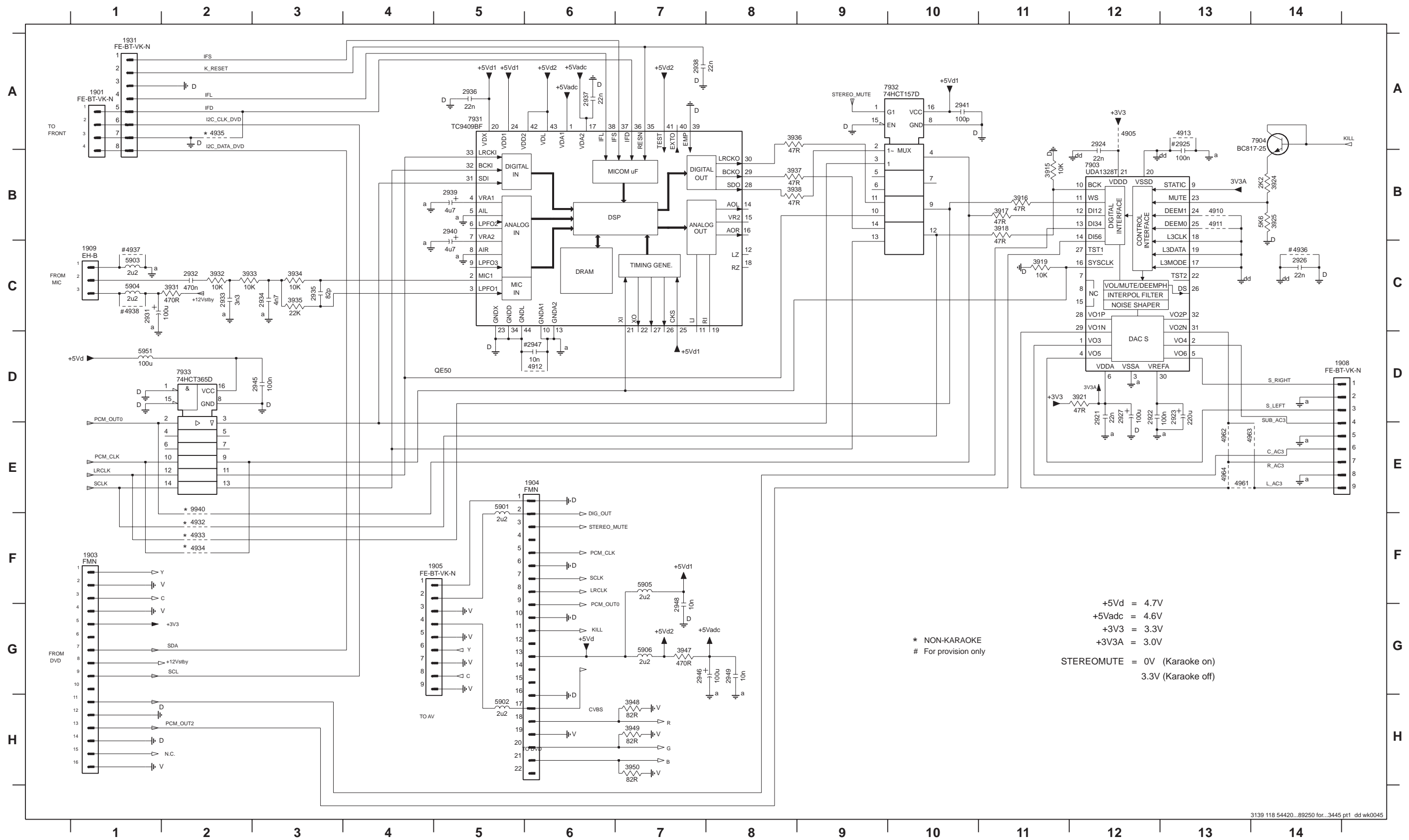


2803 A1	2812 B2	3802 B2	3806 B1	3814 B2	4801 A2
2804 A1	2808 A2	3803 A1	3807 B1	3809 B2	7803 A1
2806 A1	2809 A2	3805 B1	3808 B1	3811 B3	7804 B1
				3817 B3	7806 B2



NEW DAC BOARD - CIRCUIT DIAGRAM (From wk101 onwards)

1901 A1 1905 F4 1931 A1 2923 D13 2926 C14 2932 C2 2935 C3 2938 A7 2941 A10 2947 D6 3915 B11 3918 B11 3924 B14 3932 C2 3935 C3 3938 B8 3949 H7 4910 B13 4913 A13 4934 F2 4937 C1 4962 E13 5901 E5 5904 C1 5951 D1 7931 A5 9940 E2
 1903 F1 1908 D14 2921 D12 2924 A12 2927 D12 2933 C2 2936 A5 2939 B5 2945 D3 2948 G7 3916 B11 3919 C11 3925 B14 3933 C2 3936 A8 3947 G7 3950 H7 4911 B13 4932 F2 4935 A2 4938 C1 4963 E14 5902 H5 5905 F7 7903 B12 7932 A9
 1904 E6 1909 C1 2922 D12 2925 A13 2931 C1 2934 C3 2937 A6 2940 B5 2946 G7 2949 G8 3917 B11 3921 D12 3931 C2 3934 C3 3937 B8 3948 H7 4905 A12 4912 D6 4933 F2 4936 C14 4961 E13 4964 E13 5903 C1 5906 G7 7904 A14 7933 D2



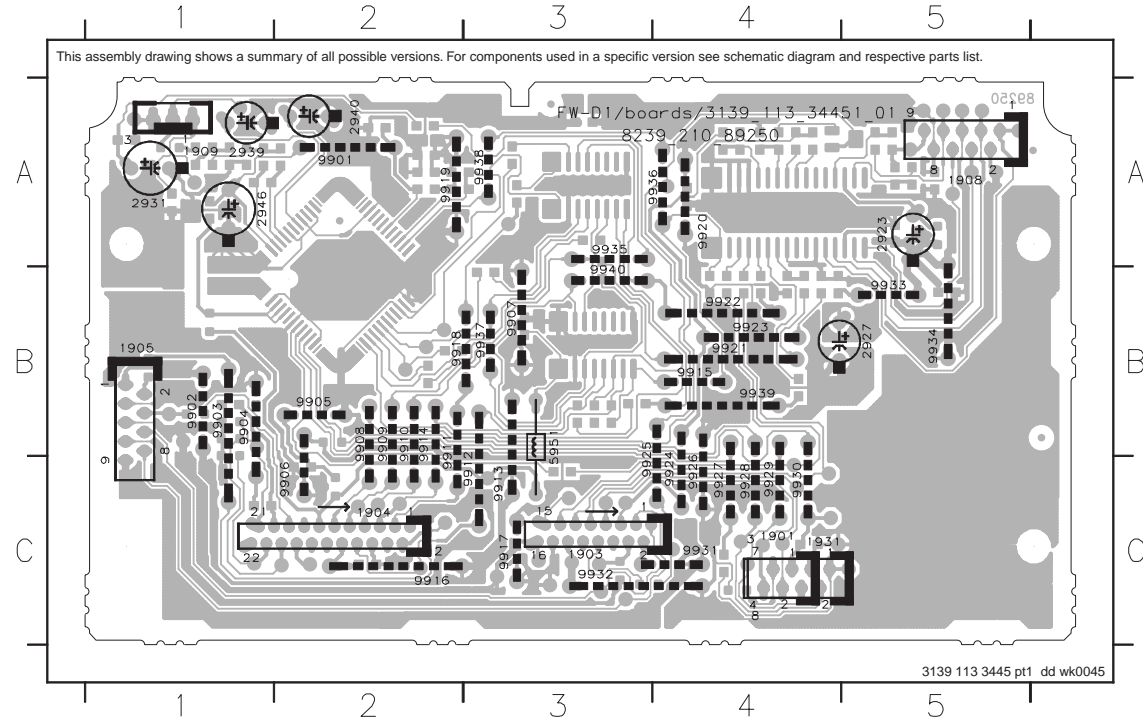
* NON-KARAOKE
 # For provision only

+5Vd = 4.7V
 +5Vadc = 4.6V
 +3V3 = 3.3V
 +3V3A = 3.0V
 STEREO MUTE = 0V (Karaoke on)
 3.3V (Karaoke off)

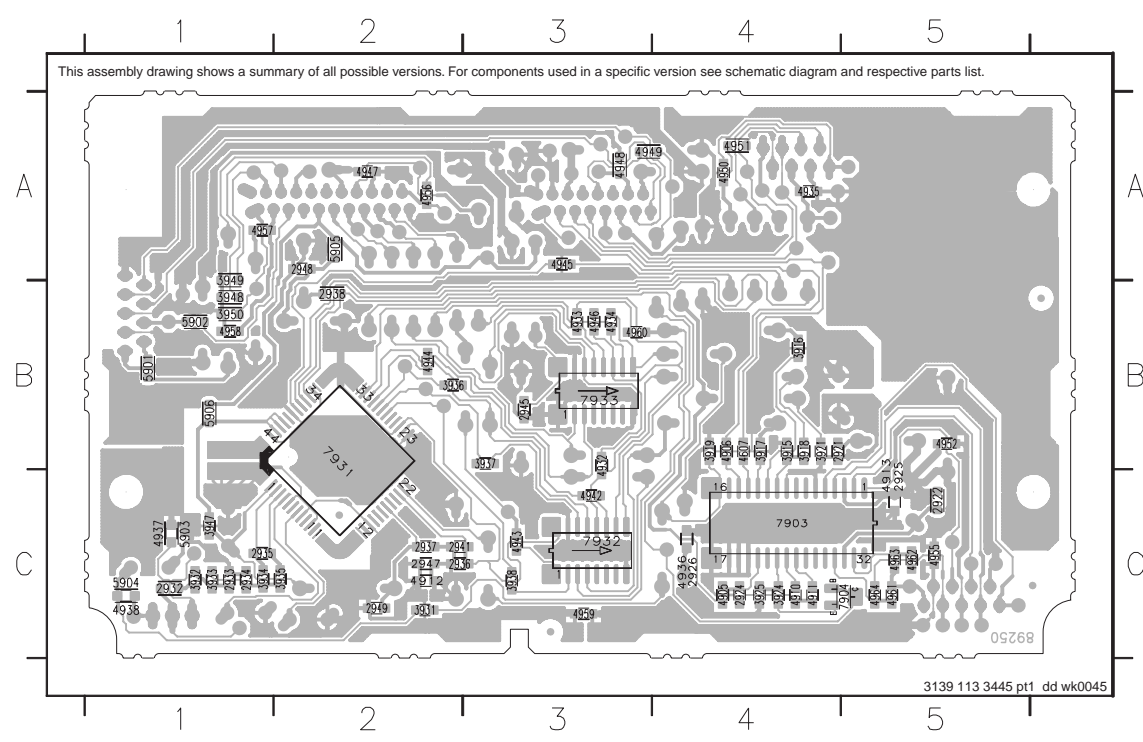
NEW DAC BOARD - COMPONENT & CHIP LAYOUTS (From wk101 onwards)

ELECTRICAL PARTS LIST - DAC BOARD (New Board)

1901	C4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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2901	C4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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MISCELLANEOUS

1903	2422 025 16525	Flex Socket 16pin Vert.
1904	2422 025 16526	Flex Socket 22pin Vert.
1905	2422 025 14518	Flex Socket 9pin Vert.
1908	2422 025 14518	Flex Socket 9pin Vert.
1931	4822 265 11515	Flex Socket 8pin Vert.

CAPACITORS

2921	4822 126 14494	22nF 10% 25V
2922	4822 126 14585	100nF 10% 50V
2923	4822 124 11912	220µF 20% 6,3V
2924	4822 126 14494	22nF 10% 25V
2926	4822 126 14494	22nF 10% 25V
2927	4822 124 41584	100µF 20% 10V
2931	4822 124 40207	100µF 20% 25V
2932	4822 126 13482	470nF +80/-20% 16V
2933	5322 126 11579	3,3nF 10% 63V
2934	4822 126 13193	4,7nF 10% 63V
2935	4822 126 14226	82pF 5% 50V
2936	4822 126 14494	22nF 10% 25V
2937	4822 126 14494	22nF 10% 25V
2938	5322 122 32654	22nF 10% 63V
2939	4822 124 40769	4,7µF 20% 100V
2940	4822 124 40769	4,7µF 20% 100V
2941	4822 122 31765	100pF 2% 63V
2945	4822 126 14305	100nF 10% 16V
2946	4822 124 40207	100µF 20% 25V
2948	5322 126 11583	10nF 10% 50V
2949	5322 126 11583	10nF 10% 50V

RESISTORS

3915	4822 051 30103	10k 5% 0,062W
3916	4822 051 30479	47R 5% 0,062W
3917	4822 051 30479	47R 5% 0,062W
3918	4822 051 30479	47R 5% 0,062W
3919	4822 051 30103	10k 5% 0,062W
3921	4822 051 30479	47R 5% 0,062W
3924	4822 051 30222	2k2 5% 0,062W
3925	4822 051 30562	5k6 5% 0,063W
3931	4822 051 30471	470R 5% 0,062W
3932	4822 051 30103	10k 5% 0,062W
3933	4822 051 30103	10k 5% 0,062W
3934	4822 051 30103	10k 5% 0,062W
3935	4822 051 30223	22k 5% 0,062W
3936	4822 051 30479	47R 5% 0,062W
3937	4822 051 30479	47R 5% 0,062W
3938	4822 051 30479	47R 5% 0,062W
3947	4822 051 30471	470R 5% 0,062W
3948	2120 108 92604	82R 1% 0,1W
3949	2120 108 92604	82R 1% 0,1W
3950	2120 108 92604	82R 1% 0,1W
4607	4822 051 30008	0R Jumper 0603
4905	4822 051 30008	0R Jumper 0603

4906	4822 051 30008	0R Jumper 0603
4910	4822 051 30008	0R Jumper 0603
4911	4822 051 30008	0R Jumper 0603
4912	4822 051 30008	0R Jumper 0603
4913	4822 051 30008	0R Jumper 0603
4932	4822 051 30008	0R Jumper 0603 Non-Kara
4933	4822 051 30008	0R Jumper 0603 Non-Kara
4934	4822 051 30008	0R Jumper 0603 Non-Kara
4935	4822 051 30008	0R Jumper 0603 Non-Kara
4942	4822 051 30008	0R Jumper 0603
4943	4822 051 30008	0R Jumper 0603
4944	4822 051 30008	0R Jumper 0603
4945	4822 051 20008	0R Jumper 0805
4946	4822 051 30008	0R Jumper 0603
4947	4822 051 30008	0R Jumper 0603
4948	4822 051 20008	0R Jumper 0805
4949	4822 051 20008	0R Jumper 0805
4950	4822 051 30008	0R Jumper 0603
4951	4822 051 20008	0R Jumper 0805
4952	4822 051 30008	0R Jumper 0603
4955	4822 051 30008	0R Jumper 0603
4956	4822 051 30008	0R Jumper 0603
4957	4822 051 20008	0R Jumper 0805
4958	4822 051 20008	0R Jumper 0805
4960	4822 051 30008	0R Jumper 0603
4961	4822 051 30008	0R Jumper 0603 for FW-D5
4962	4822 051 30008	0R Jumper 0603 for FW-D5
4963	4822 051 30008	0R Jumper 0603 for FW-D1
4964	4822 051 30008	0R Jumper 0603 for FW-D1

COILS & FILTERS

5901	4822 157 10586	Coil 2,2µH 10% 0805
5902	4822 157 10586	Coil 2,2µH 10% 0805
5903	4822 157 10586	Coil 2,2µH 10% 0805
5904	4822 157 10586	Coil 2,2µH 10% 0805
5905	4822 157 10586	Coil 2,2µH 10% 0805
5906	4822 157 10586	Coil 2,2µH 10% 0805
5951	4822 157 11228	Coil 100µH 5%

TRANSISTORS & INTEGRATED CIRCUITS

7903	4822 209 17423	UAD1328T
7904	4822 130 42804	BC817-25
7931	4822 209 15973	TC9409BF
7932	9337 137 50653	74HCT157D
7933	4822 209 16261	74HCT365D

Note: Only the parts mentioned in this list are normal service spare parts.

EXPLODED VIEW - MAIN UNIT

** FOR VERSION /22 ONLY
 * FOR KARAOKE VERSIONS ONLY
 @ APPEARANCE DIFFERS ACCORDING TO VERSION
 % FOR JBE DVD MODULE APPLICATION ONLY
 !! PARTS DIFFER FOR JBE AND ASD-1 APPLICATION
 & FOR ALL VERSIONS EXCEPT /37
 # 1X FOR ALL VERSIONS EXCEPT /37
 \$\$\$ FOR ALL FW-D5 VERSIONS ONLY
 :: FOR VERSIONS /37 & /22 ONLY

