

# Service Service Service

## Product Service Group CE Audio

# Service Information

Already published Service Informations :

### CORRECTION TO SERVICE MANUAL

#### **\*3CDC-LC-VCD Module (Chapter 10):**

Due to error on the pt.1 drawings and the introduction of the pt.2 Board (identified by the last digit of the 12NC - 3103 303 34742), the new 3CDC-LC-VCD Module (Chapter 10) are enclosed which consists of the new layout, circuit drawings and parts list for the pt. 1 and pt.2 Boards (Page 10-1 to 10-18).

#### **\*Correction of Mechanical & Accessories parts list (Page 14-2):**

The correct codenumber for the Tweeter for the Loudspeaker Box should read:

9965 000 11088 Tweeter

### CHANGES DURING PRODUCTION

#### **FRONT DISPLAY BOARD**

\*During production the software of the main processor IC (7400) has been upgrade to version 33. The new service code for the main processor IC (7400) is 9965 000 13002.

Reason : To solve plop from other sources to VCD.

#### **AF9 BOARD**

\*From production week 0211 onwards the following has been changed to solve current leakage in capacitor.

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



# **3CDC-LC-VCD**

## **(3 Disc Carousel Changer)**

Layout stage .1&amp;2

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## Service hints

### CAUTION

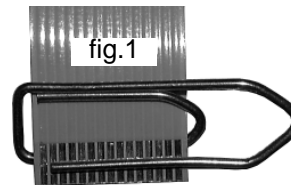
**CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE CD DRIVE ELECTRONICS WHEN CONNECTING A NEW CD MECHANISM. THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE**

- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

**ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.**

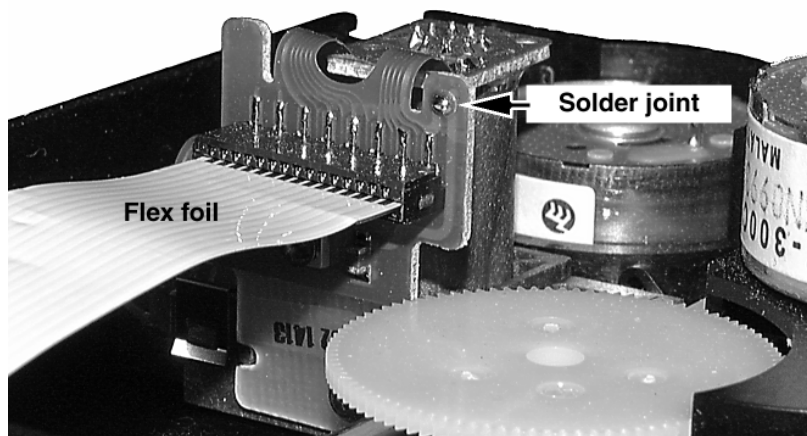
The following steps have to be done when replacing the CD mechanism:

1. Disconnect flexfoil cable from the old CD drive
2. Put a paperclip onto the flexfoil cable to short-circuit the contacts (fig.1)
3. Remove the old CD drive
4. Remove paperclip from the flexfoil cable and connect it to the new CD drive
5. Position the new CD drive on its studs
6. Remove solder joint from the Laser unit (see below)



**Attention:** The laser diode of this CD drive is protected against ESD by a solder joint which short-circuits the laserdiode to ground.

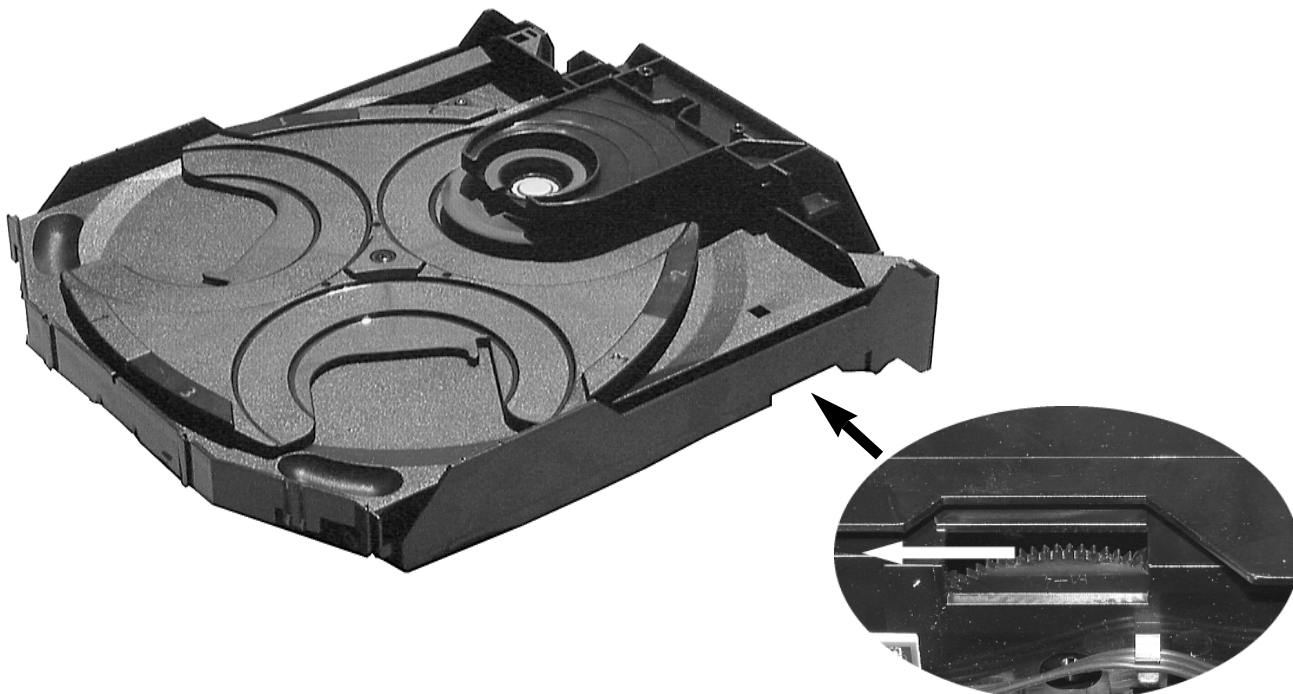
For proper functionality of the CD drive this solder joint must be removed **after** connecting the drive to the set.



### Emergency open

In case of a Supply fault, the tray can be opened manually.

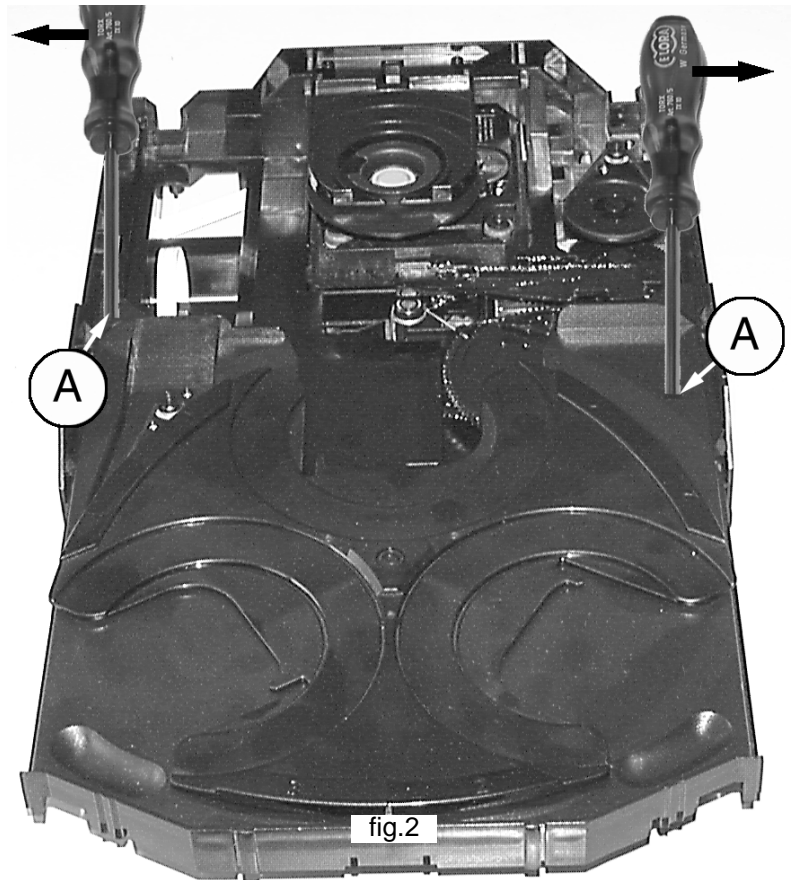
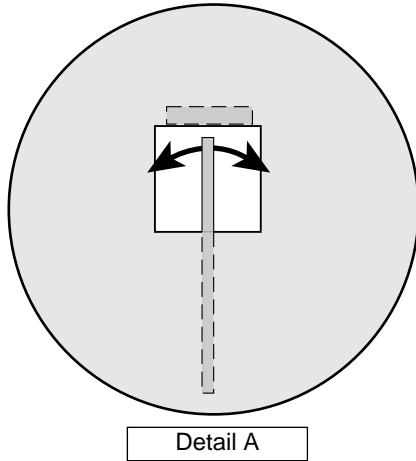
1. Remove the top cover of the set to get access to the Changer Module.
2. Turn gearwheel clockwise (as shown in picture below).



## Service hints

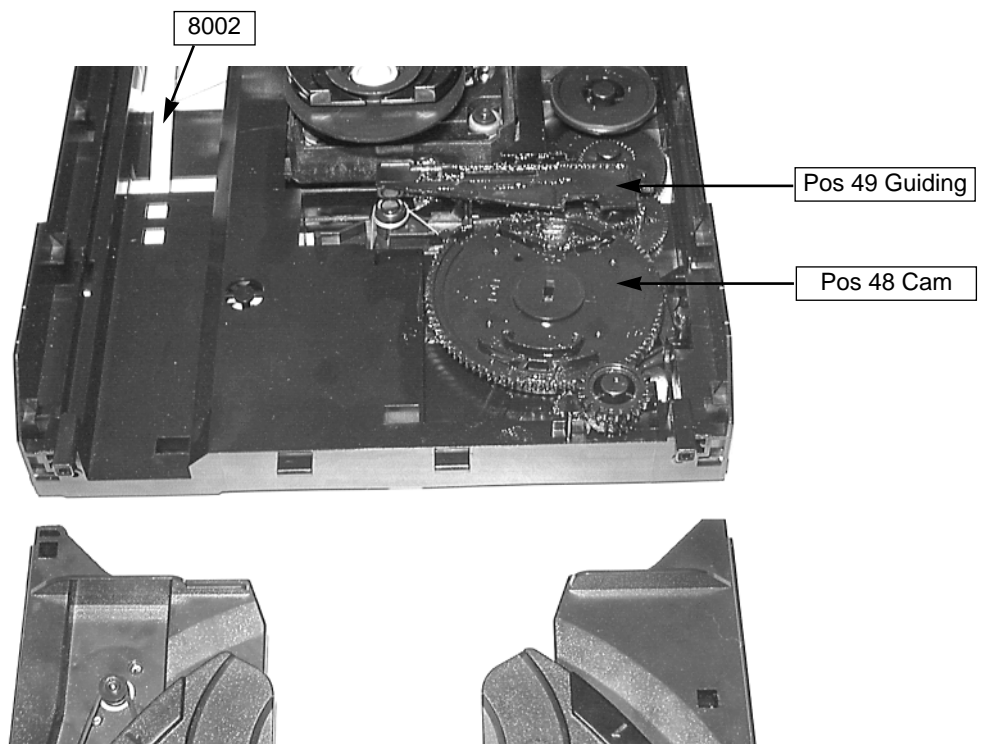
### Dismantling of Tray

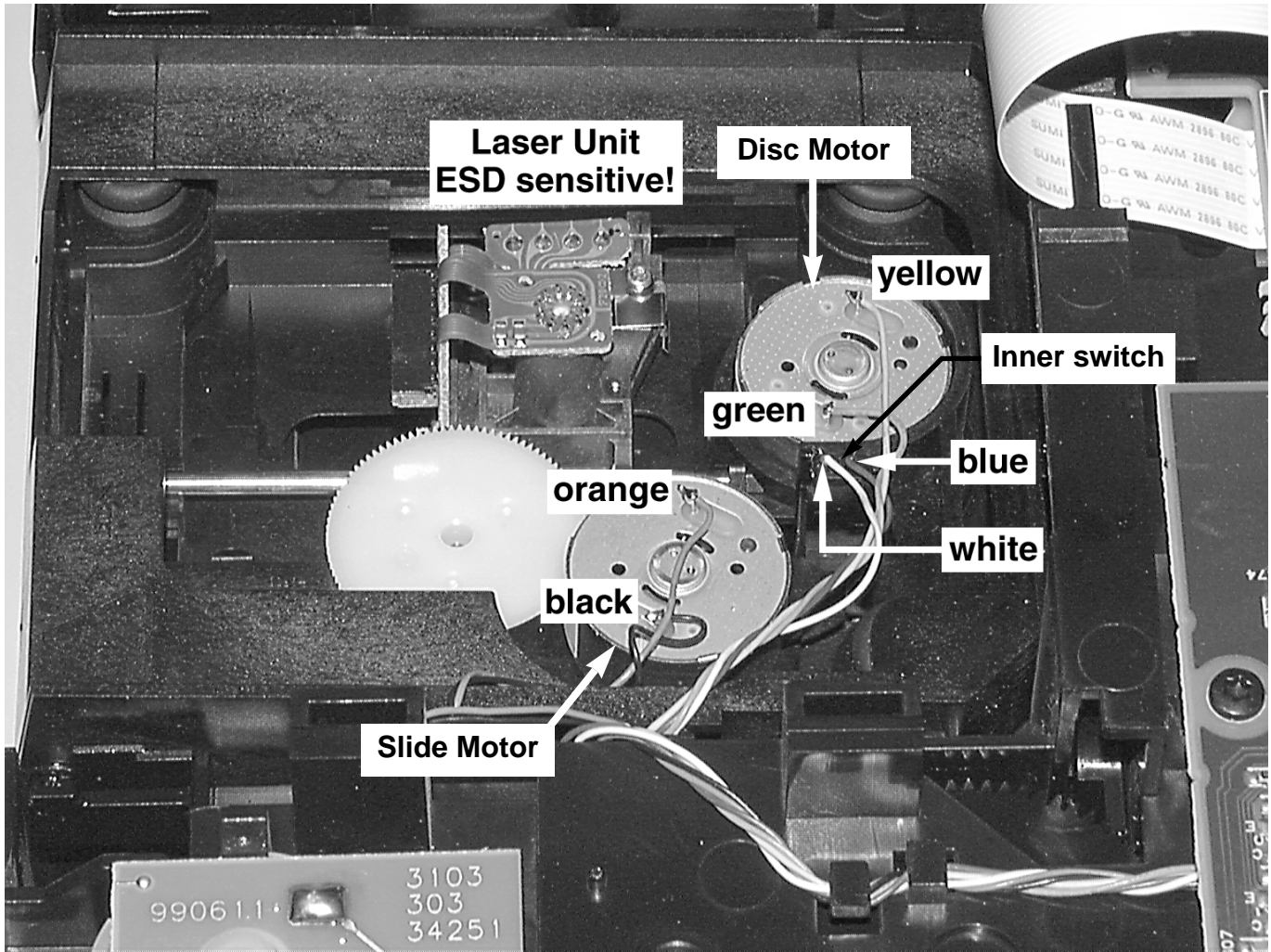
1. Open the tray.
2. Release 2x catch as shown in fig. 2 and Detail A
3. Pull tray out.



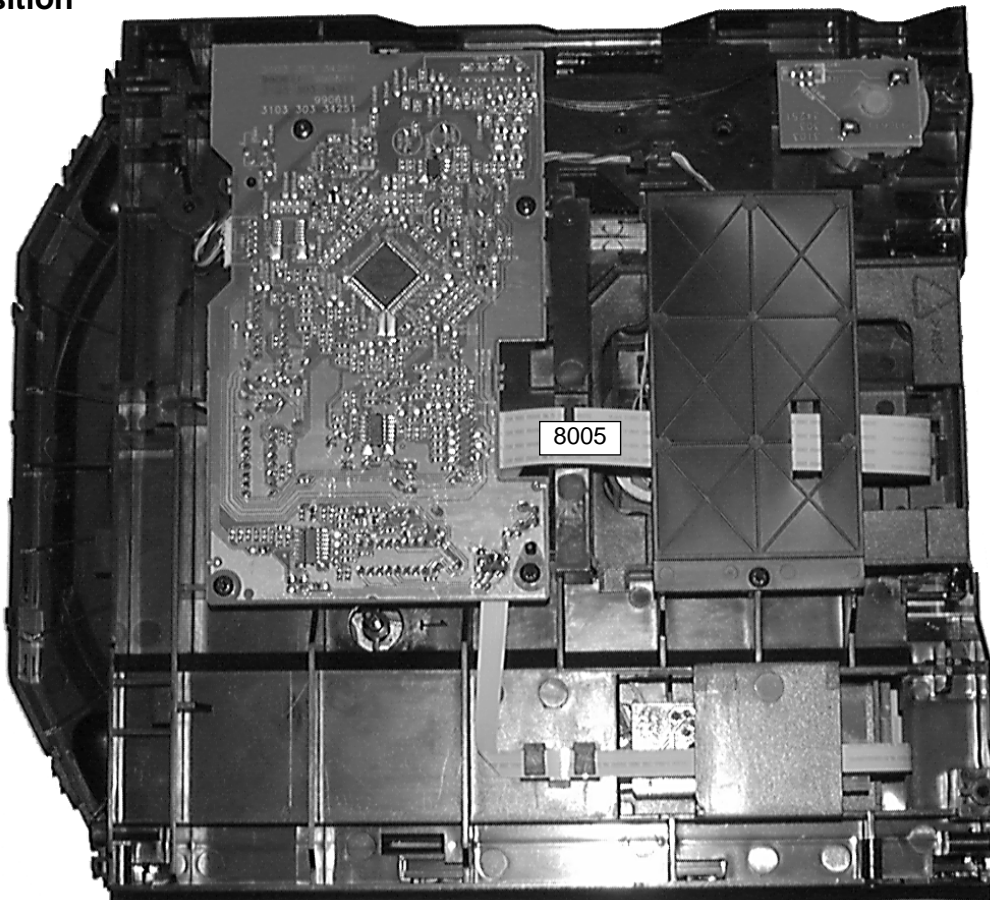
### Assembling of Tray

1. Turn Cam (pos. 48) clockwise to end position.
2. If necessary - move Guiding (pos. 49) to the right end position.
3. Insert the Tray.

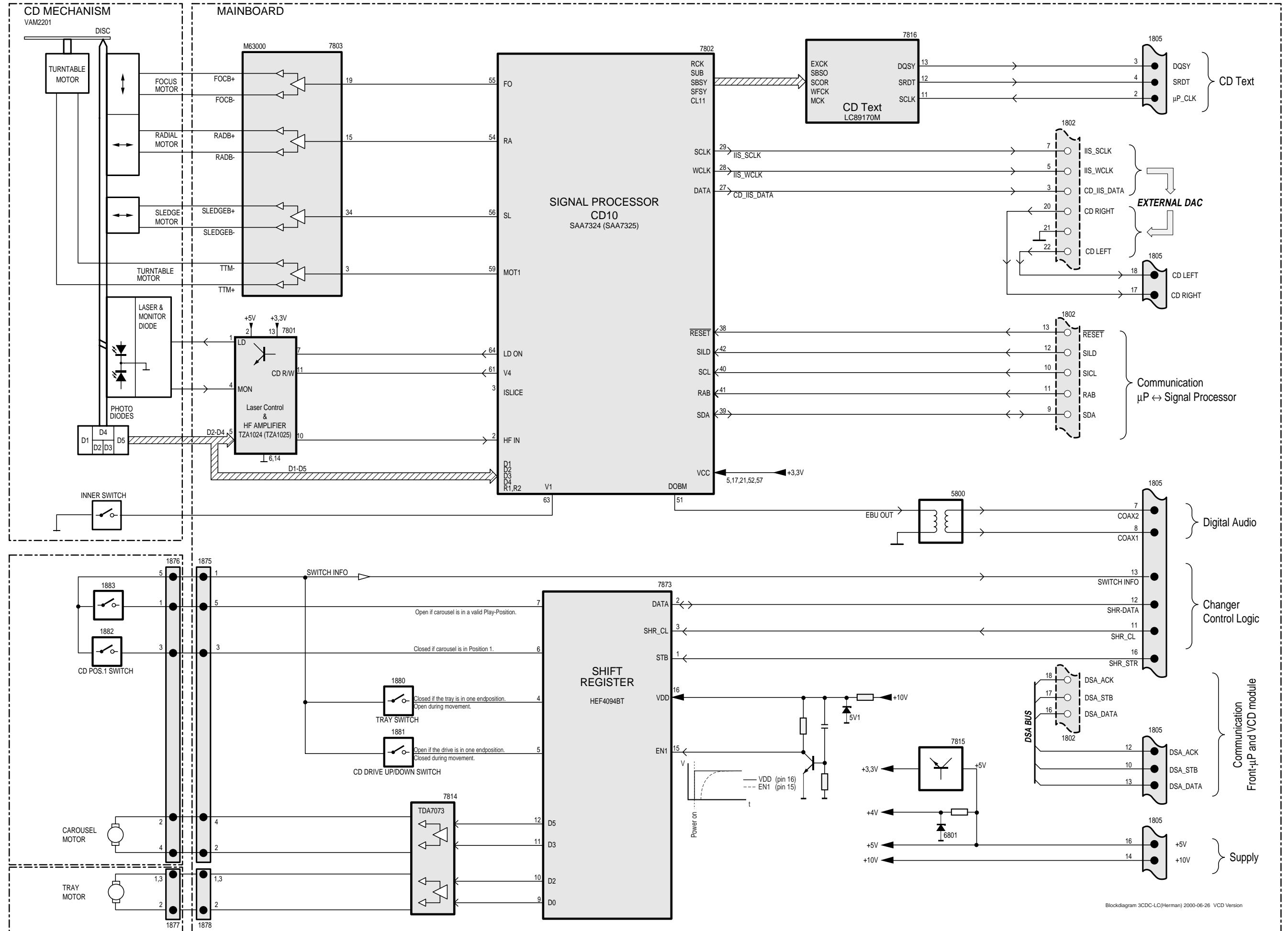


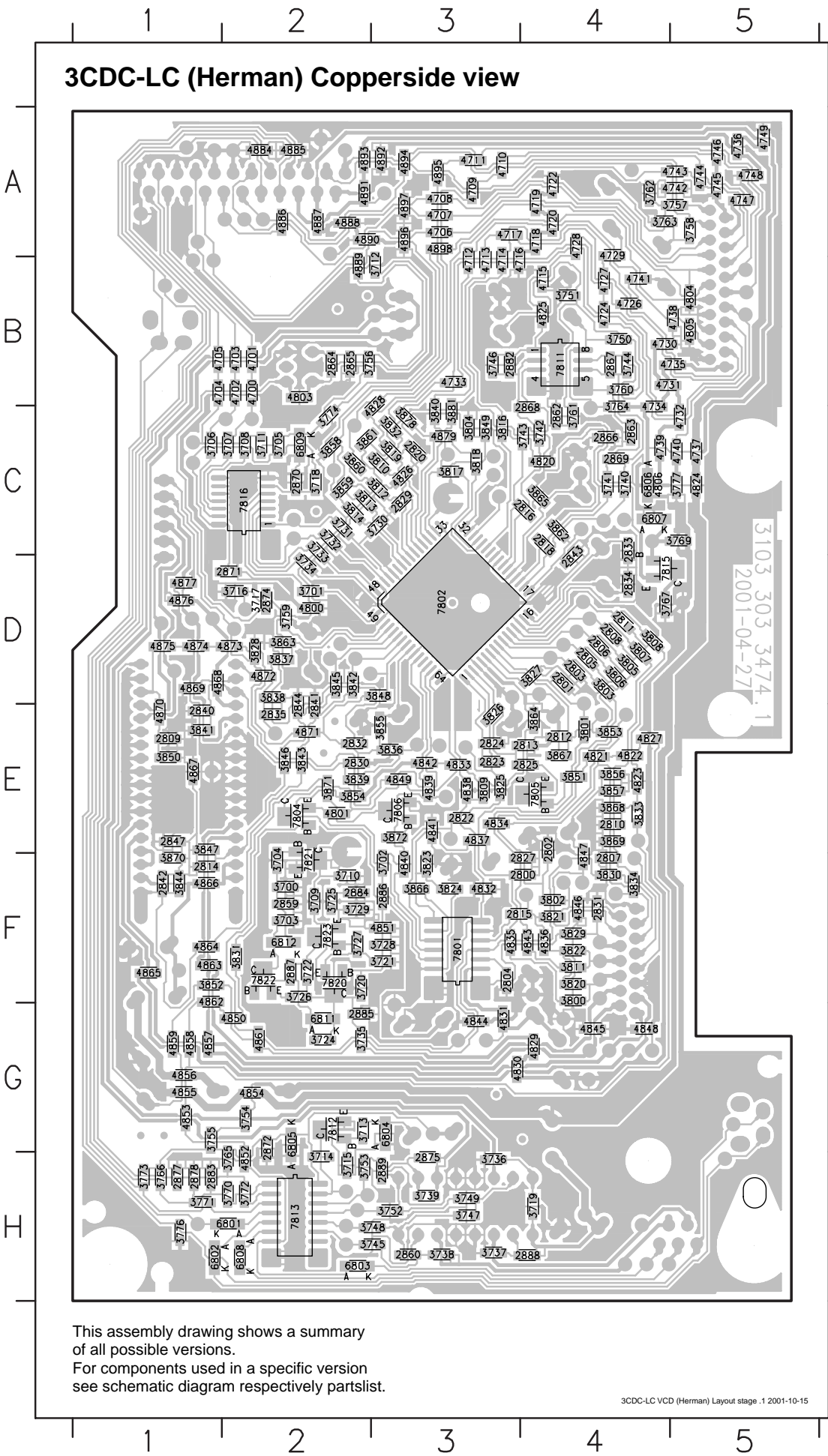


Service Position



# BLOCK DIAGRAM 3CDC-LC VCD Version

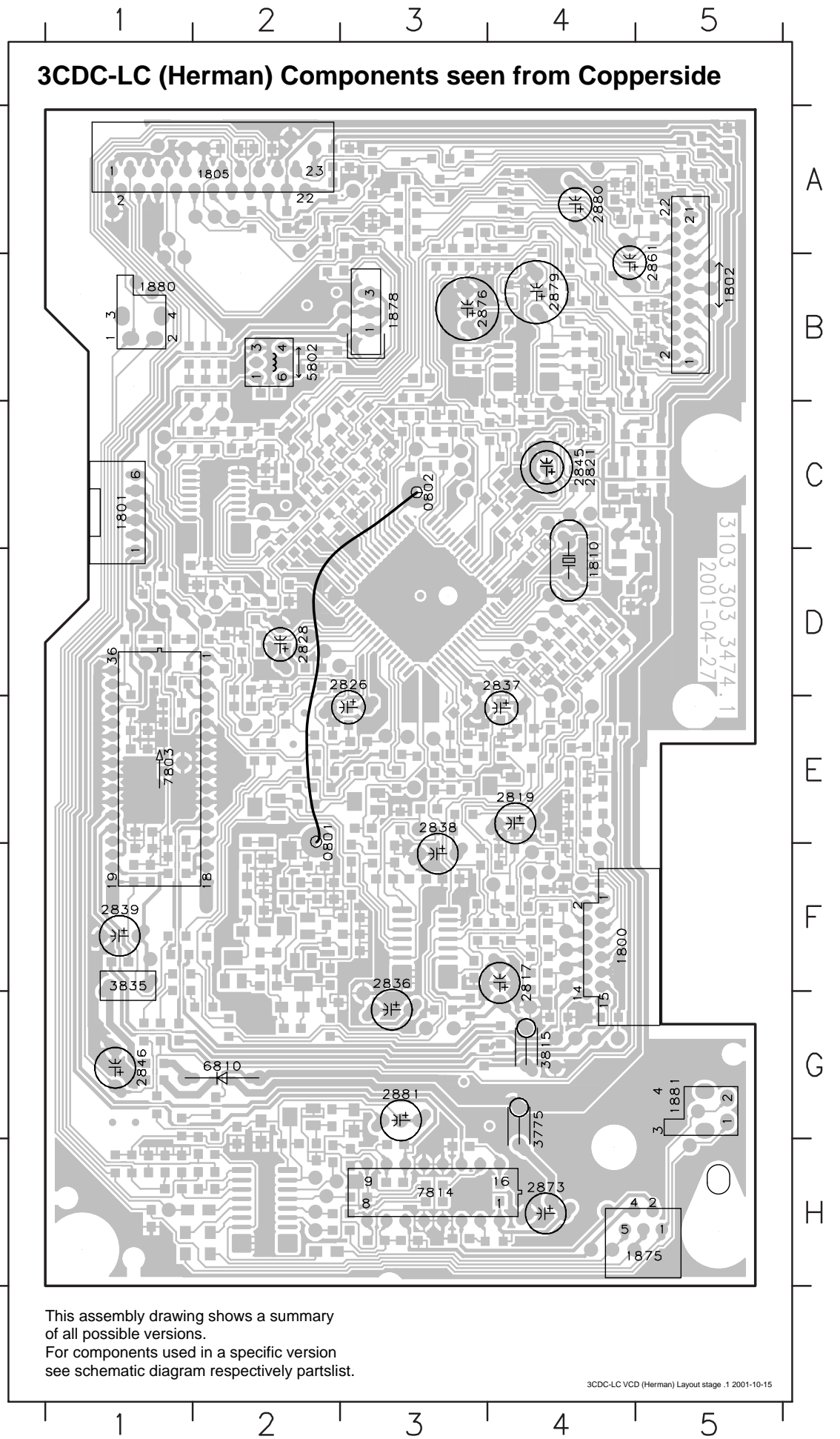




This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist.

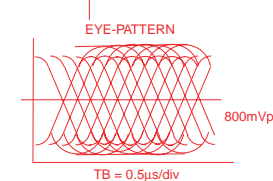
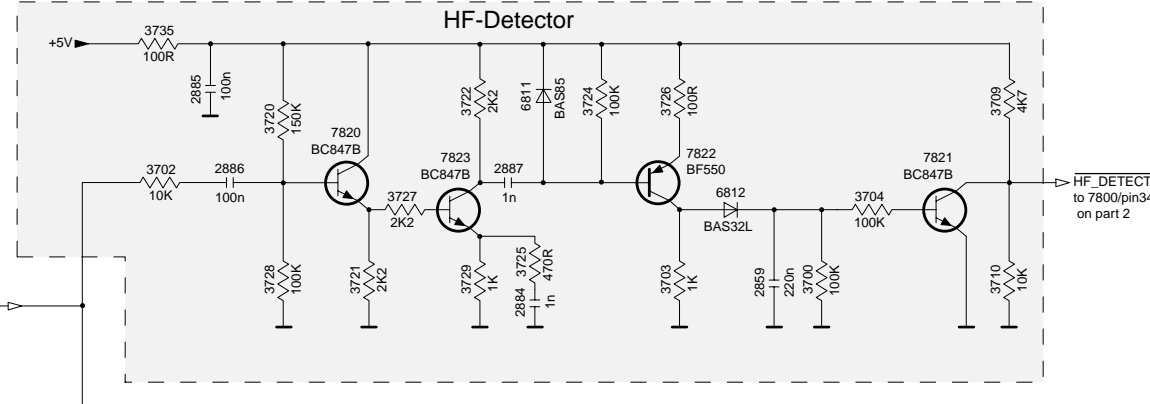
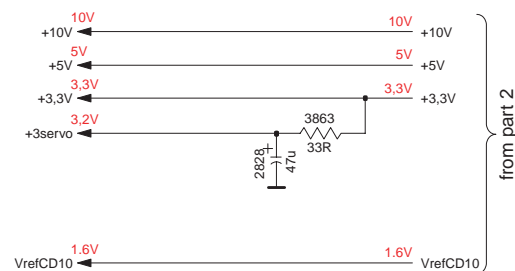
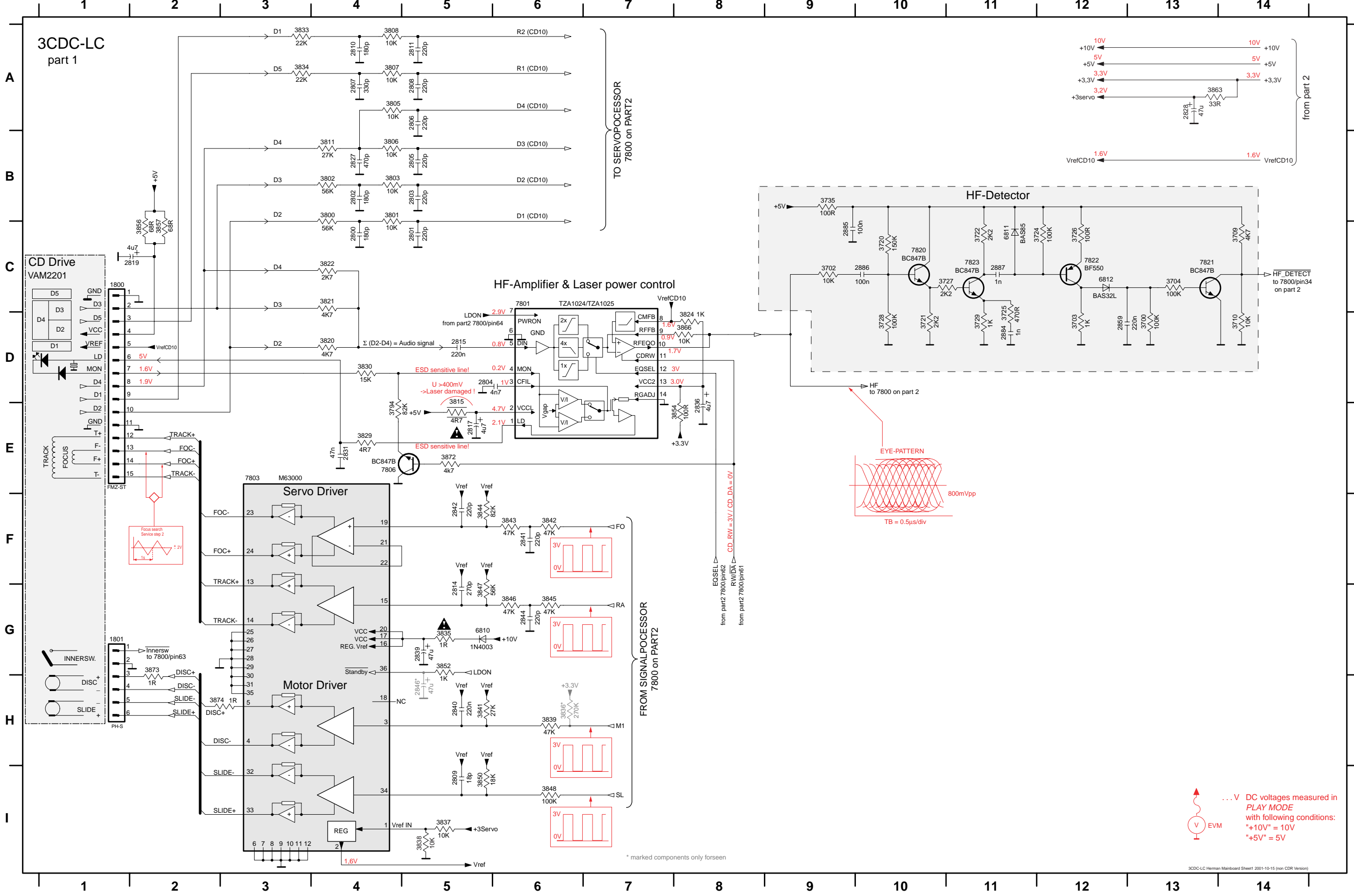
Mapping

Copperside			Componentside		
2800 F4	3729 F2	3845 D2	4827 E4	7823 F2	0801 E2
2801 D4	3730 C3	3846 E2	4828 C3		0802 C3
2802 E4	3731 C2	3847 E1	4829 G4		1800 F4
2803 D4	3732 C2	3848 D3	4830 G3		1801 C1
2804 F3	3733 C2	3849 C3	4831 G3		1802 B5
2805 D4	3734 D2	3850 E1	4832 F3		1805 A2
2806 D4	3735 G2	3851 E4	4833 E3		1810 D4
2807 F4	3736 H3	3852 F1	4834 E3		1875 H5
2808 D4	3737 H3	3853 E4	4835 F3		1878 B3
2809 E1	3738 H3	3854 E2	4836 F4		1880 B1
2810 E4	3739 H3	3855 E3	4837 E3		1881 G5
2811 D4	3740 C4	3856 E4	4838 E3		2817 F4
2812 E4	3741 C4	3857 E4	4839 E3		2819 E4
2813 F4	3742 C4	3858 C2	4840 F3		2821 C4
2814 F1	3743 C4	3859 C2	4841 E3		2826 D3
2815 F3	3744 B4	3860 C2	4842 E3		2828 D2
2816 C4	3745 H3	3861 C2	4843 F4		2836 F3
2818 C4	3746 B3	3862 C4	4844 G3		2837 D4
2820 C3	3747 H3	3863 D2	4845 G4		2838 E3
2822 E3	3748 H3	3864 E4	4846 F4		2839 F1
2823 E3	3749 H3	3865 C4	4847 F4		2845 C4
2824 E3	3750 B4	3866 F3	4848 G4		2846 G1
2825 E4	3751 B4	3867 E4	4849 E3		2861 B5
2827 F4	3752 H3	3868 E4	4850 G2		2873 H4
2829 C3	3753 H2	3869 E4	4851 F3		2876 B3
2830 E2	3754 G2	3870 F1	4852 H2		2879 B4
2831 F4	3755 G1	3871 E2	4853 G1		2880 A4
2832 E2	3756 B2	3872 E3	4854 G2		2881 G3
2833 C4	3757 A5	3878 C3	4855 G1		3775 G4
2834 D4	3758 A5	3881 C3	4856 G1		3815 G4
2835 E2	3759 D2	4700 B2	4857 G1		3835 F1
2840 E1	3760 B4	4701 B2	4858 G1		5802 B2
2841 E2	3761 C4	4702 B2	4859 G1		6810 E2
2842 F1	3762 A4	4703 B2	4861 G2		7803 E1
2843 D4	3763 A4	4704 B1	4862 F1		7814 H3
2844 E2	3764 C4	4705 B1	4863 F1		
2847 E1	3765 H2	4706 A3	4864 F1		
2859 F2	3766 H1	4707 A3	4865 F1		
2860 H3	3767 D4	4708 A3	4866 F1		
2862 C4	3769 C5	4709 A3	4867 E1		
2863 C4	3770 H2	4710 A3	4868 D1		
2864 B2	3771 H1	4711 A3	4869 D1		
2865 B2	3772 H2	4712 B3	4870 E1		
2866 C4	3773 H1	4713 B3	4871 E2		
2867 B4	3774 C2	4714 B3	4872 D2		
2868 C4	3776 H1	4715 B4	4873 D2		
2869 C4	3777 C5	4716 B3	4874 D1		
2870 C2	3800 F4	4717 A3	4875 D1		
2871 D2	3801 E4	4718 A4	4876 D1		
2872 G2	3802 F4	4719 A4	4877 D1		
2874 D2	3803 D4	4720 A4	4879 C3		
2875 H3	3804 C3	4722 A4	4884 A2		
2877 H1	3805 D4	4724 B4	4885 A2		
2878 H1	3806 D4	4726 B4	4886 A2		
2882 B3	3807 D4	4727 B4	4887 A2		
2883 H1	3808 D4	4728 A4	4888 A2		
2884 F2	3809 E3	4729 A4	4889 B2		
2885 G2	3810 C3	4730 B4	4890 A2		
2886 F3	3811 F4	4731 B4	4891 A2		
2887 F2	3812 C3	4732 C5	4892 A3		
2888 H4	3813 C2	4733 B3	4893 A2		
2889 H3	3814 C2	4734 C4	4894 A3		
3700 F2	3816 C3	4735 B5	4895 A3		
3701 D2	3817 C3	4736 A5	4896 A3		
3702 F3	3818 C3	4737 C5	4897 A3		
3703 F2	3819 C3	4738 B5	4898 A3		
3704 F2	3820 F4	4739 C4	6801 H2		
3705 C2	3821 F4	4740 C5	6802 H1		
3706 C1	3822 F4	4741 B4	6803 H2		
3707 C2	3823 F3	4742 A5	6804 G3		
3708 C2	3824 F3	4743 A5	6805 G2		
3709 F2	3825 E3	4744 A5	6806 C4		
3710 F2	3826 E3	4745 A5	6807 C4		
3711 C2	3827 D4	4746 A5	6808 H2		
3712 B3	3828 D2	4747 A5	6809 C2		
3713 G2	3829 F4	4748 A5	6811 G2		
3714 H2	3830 F4	4749 A5	6812 F2		
3715 H2	3831 F2	4800 D2	7801 F3		
3716 D2	3832 C3	4801 E2	7802 D3		
3717 D2	3833 E4	4803 B2	7804 E2		
3718 C2	3834 F4	4804 B5	7805 E4		
3719 H4	3836 E3	4805 B5	7806 E3		
3720 F2	3837 D2	4806 C4	7811 B4		
3721 F3	3838 D2	4820 C4	7812 G2		
3722 F2	3839 E2	4821 E4	7813 H2		
3724 G2	3840 C3	4822 E4	7815 D4		
3725 F2	3841 E1	4823 E4	7816 C2		
3726 F2	3842 D2	4824 C5	7820 F2		
3727 F2	3843 E2	4825 B4	7821 F2		
3728 F3	3844 F1	4826 C3	7822 F2		



This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist.

1800	C1	2803	B5	2808	A5	2815	D5	2830	H6	2839	G5	2848	H5	2886	C10	3704	C13	3722	C11	3728	D10	3802	B4	3808	A4	3822	C4	3834	A3	3839	H6	3845	G6	3852	H5	3866	D8	3874	H2	7801	D6	7822	C12		
1801	G1	2804	D6	2809	I5	2817	E5	2831	E4	2840	H5	2859	D13	2887	C11	3709	C14	3724	C12	3729	D11	3803	B4	3811	B4	3824	D8	3835	G5	3841	H5	3846	G6	3854	E8	3868	A4	3886	A10	3886	E3	7823	C13		
2800	C4	2805	B5	2810	A4	2819	C2	2832	I6	2841	F6	2860	A9	2870	D13	3710	D14	3725	D11	3735	B9	3805	A4	3815	E5	3829	E4	3836	H6	3842	F6	3847	G5	3856	C2	3869	A4	4801	E8	7806	E5				
2801	C5	2806	A5	2811	A5	2827	B4	2835	I5	2842	F5	2884	D11	3702	C9	3720	C10	3726	C12	3800	B4	3806	B4	3820	D4	3830	D4	3837	I5	3843	F6	3848	I6	3857	C2	3872	E5	6811	C11	7820	C10				
2802	B4	2807	A4	2814	G5	2828	A13	2836	E8	2844	G6	2885	C9	3703	D12	3721	D10	3727	C11	3801	B4	3807	A4	3821	C4	3833	A3	3838	I5	3844	F5	3850	I5	3863	G2	3873	G2	6812	C12	7821	C13				

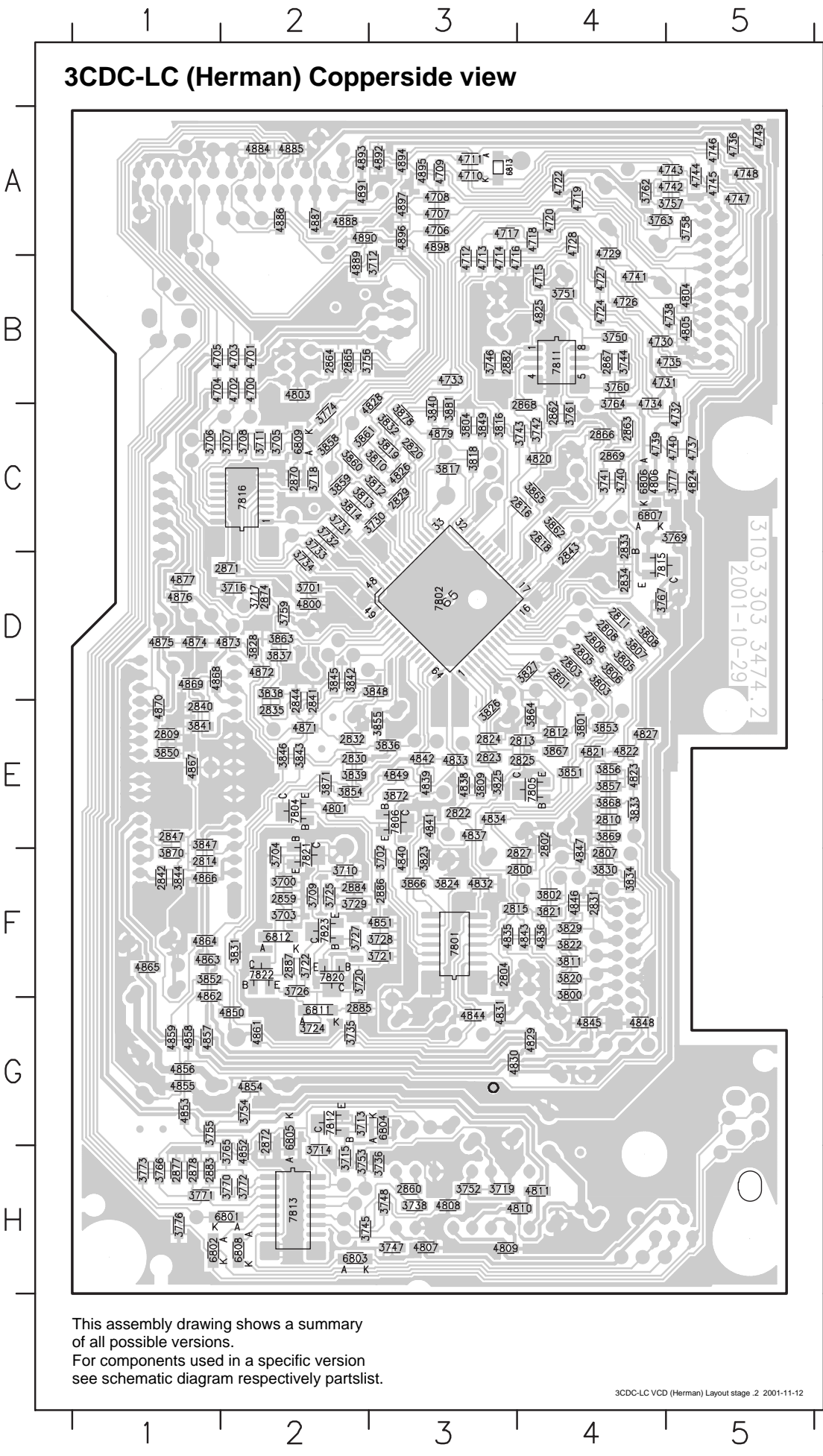


... V DC voltages measured in PLAY MODE with following conditions: "+10V" = 10V "+5V" = 5V

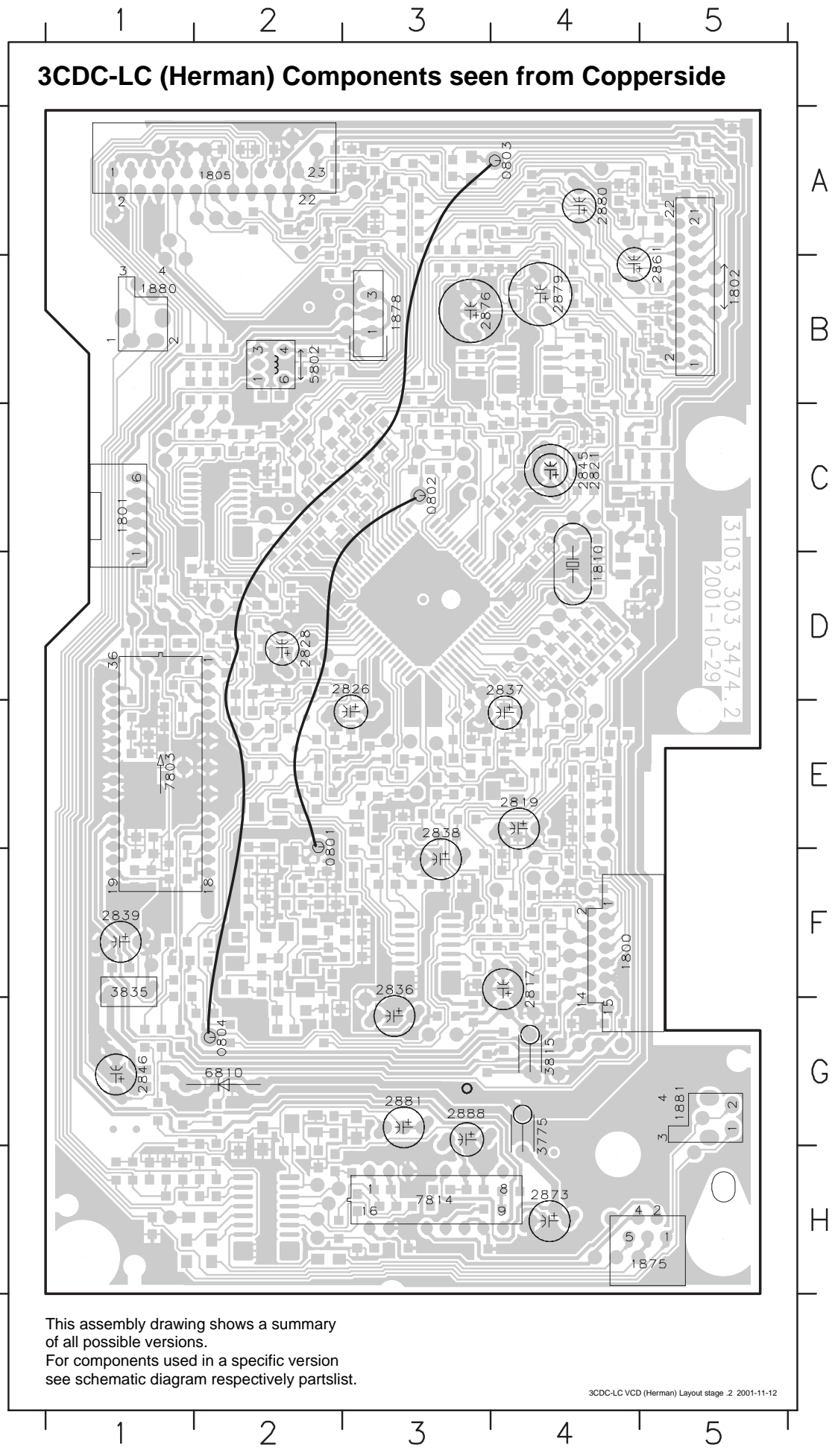
\* marked components only foreseen



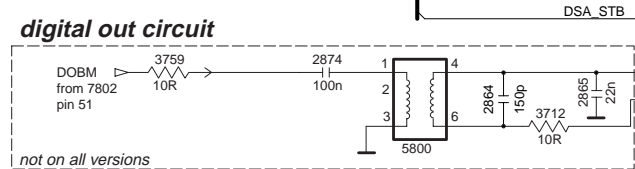
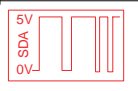
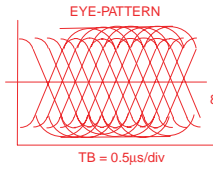
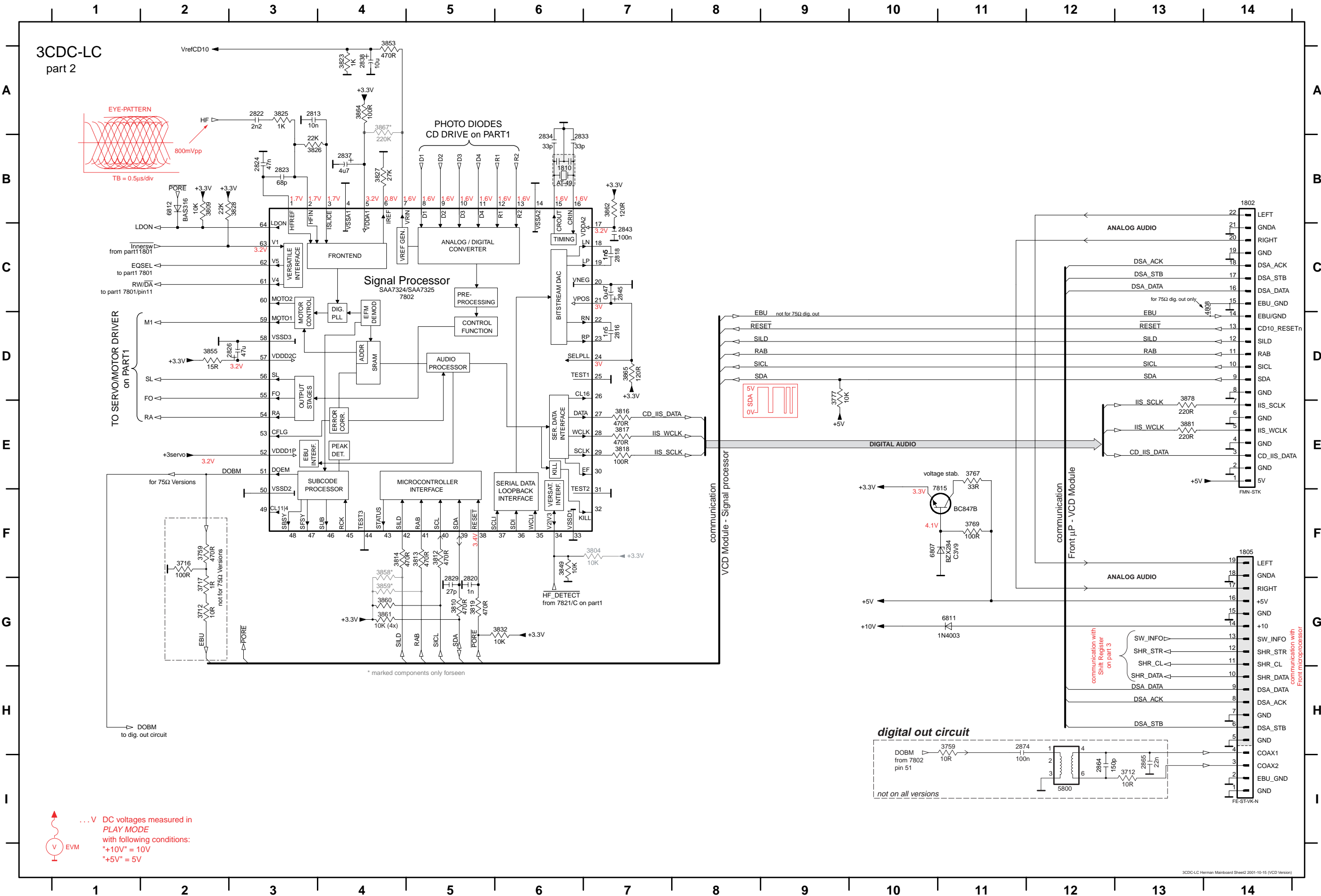
Mapping



Copperside				Componentside	
2800 F4	3732 C2	3851 E4	4828 C3	7823 F2	0801 E2
2801 D4	3733 C2	3852 F1	4829 G4		0802 C3
2802 E4	3734 D2	3853 E4	4830 G3		0803 A4
2803 D4	3735 G2	3854 E2	4831 G3		0804 G2
2804 F3	3736 H3	3855 E3	4832 F3		1800 F4
2805 D4	3738 H3	3856 E4	4833 E3		1801 C1
2806 D4	3740 C4	3857 E4	4834 E3		1802 B5
2807 F4	3741 C4	3858 C2	4835 F3		1805 A2
2808 D4	3742 C4	3859 C2	4836 F4		1810 D4
2809 E1	3743 C4	3860 C2	4837 E3		1875 H5
2810 E4	3744 B4	3861 C2	4838 E3		1878 B3
2811 D4	3745 H2	3862 C4	4839 E3		1880 B1
2812 E4	3746 B3	3863 D2	4840 F3		1881 G5
2813 F4	3747 H3	3864 F4	4841 E3		2817 F4
2814 F1	3748 H3	3865 C4	4842 E3		2819 E4
2815 F3	3750 B4	3866 F3	4843 F4		2821 C4
2816 C4	3751 B4	3867 E4	4844 G3		2826 D3
2818 C4	3752 H3	3868 E4	4845 G4		2828 D2
2820 C3	3753 H2	3869 E4	4846 F4		2836 F3
2822 E3	3754 G2	3870 F1	4847 F4		2837 D4
2823 E3	3755 G1	3871 E2	4848 G4		2838 E3
2824 E3	3756 B2	3872 E3	4849 E3		2839 F1
2825 E4	3757 A5	3878 C3	4850 G2		2845 C4
2827 F4	3758 A5	3881 C3	4851 F3		2846 G1
2829 C3	3759 D2	4700 B2	4852 H2		2861 B5
2830 E2	3760 B4	4701 B2	4853 G1		2873 H4
2831 F4	3761 C4	4702 B2	4854 G2		2876 B3
2832 E2	3762 A4	4703 B2	4855 G1		2879 B4
2833 C4	3763 A4	4704 B1	4856 G1		2880 A4
2834 D4	3764 C4	4705 B1	4857 G1		2881 G3
2835 E2	3765 H2	4706 A3	4858 G1		2888 G3
2840 E1	3766 H1	4707 A3	4859 G1		2889 A4
2841 E2	3767 D4	4708 A3	4861 G2		3815 G4
2842 F1	3769 C5	4709 A3	4862 F1		3835 F1
2843 D4	3770 H2	4710 A3	4863 F1		5802 B2
2844 E2	3771 H1	4711 A3	4864 F1		6810 E2
2847 E1	3772 H2	4712 B3	4865 F1		7803 G1
2859 F2	3773 H1	4713 B3	4866 F1		7814 H3
2860 H3	3774 C2	4714 B3	4867 E1		
2862 C4	3776 H1	4715 B4	4868 D1		
2863 C4	3777 C5	4716 B3	4869 D1		
2864 B2	3800 F4	4717 A3	4870 E1		
2865 B2	3801 E4	4718 A4	4871 E2		
2866 C4	3802 F4	4719 A4	4872 D2		
2867 B4	3803 D4	4720 A4	4873 D2		
2868 C4	3804 C3	4722 A4	4874 D1		
2869 C4	3805 D4	4724 B4	4875 D1		
2870 C2	3806 D4	4726 B4	4876 D1		
2871 D2	3807 D4	4727 B4	4877 D1		
2872 G2	3808 D4	4728 A4	4879 C3		
2874 D2	3809 E3	4729 A4	4884 A2		
2877 H1	3810 C3	4730 B4	4885 A2		
2878 H1	3811 F4	4731 B4	4886 A2		
2882 B3	3812 C3	4732 C5	4887 A2		
2883 H1	3813 C2	4733 B3	4888 A2		
2884 F2	3814 C2	4734 C4	4889 B2		
2885 G2	3816 C3	4735 B5	4890 A2		
2886 F3	3817 C3	4736 A5	4891 A2		
2887 F2	3818 C3	4737 C5	4892 A3		
3700 F2	3819 C3	4738 B5	4893 A2		
3701 D2	3820 F4	4739 C4	4894 A3		
3702 F3	3821 F4	4740 C5	4895 A3		
3703 F2	3822 F4	4741 B4	4896 A3		
3704 F2	3823 F3	4742 A5	4897 A3		
3705 C2	3824 F3	4743 A5	4898 A3		
3706 C1	3825 E3	4744 A5	6801 H2		
3707 C2	3826 E3	4745 A5	6802 H1		
3708 C2	3827 D4	4746 A5	6803 H2		
3709 F2	3828 D2	4747 A5	6804 G3		
3710 F2	3829 F4	4748 A5	6805 G2		
3711 C2	3830 F4	4749 A5	6806 C4		
3712 B3	3831 F2	4800 D2	6807 C4		
3713 G2	3832 C3	4801 E2	6808 H2		
3714 H2	3833 E4	4803 B2	6809 C2		
3715 H2	3834 F4	4804 B5	6811 G2		
3716 D2	3836 E3	4805 B5	6812 F2		
3717 D2	3837 D2	4806 C4	6813 A3		
3718 C2	3838 D2	4807 H3	7801 F3		
3719 H3	3839 E2	4808 H3	7802 D3		
3720 F2	3840 C3	4809 H3	7804 E2		
3721 F3	3841 E1	4810 H4	7805 E4		
3722 F2	3842 D2	4811 H4	7806 E3		
3724 G2	3843 E2	4820 C4	7811 B4		
3725 F2	3844 F1	4821 E4	7812 G2		
3726 F2	3845 D2	4822 E4	7813 H2		
3727 F2	3846 E2	4823 E4	7815 D4		
3728 F3	3847 E1	4824 C5	7816 C2		
3729 F2	3848 D3	4825 B4	7820 F2		
3730 C3	3849 C3	4826 C3	7821 F2		
3731 C2	3850 E1	4827 E4	7822 F2		



1802	B14	2816	D7	2823	B3	2833	B6	2843	C7	2870	I5	3705	H7	3712	G2	3718	H6	3733	I5	3767	E11	3804	F7	3812	F5	3817	E7	3825	A3	3832	G6	3858	G4	3862	B7	3878	E13	6807	F11	7802	C5
1805	F14	2818	C7	2824	B3	2834	B6	2845	C7	2871	H6	3706	I7	3712	I13	3730	I4	3734	I5	3769	F11	3808	I7	3813	F5	3818	E7	3826	B3	3849	F6	3859	G4	3864	A4	3881	E13	6809	H7	7815	F11
1810	B6	2820	G5	2826	D3	2837	B4	2854	I12	2874	H11	3707	I7	3716	F2	3731	I5	3759	F2	3774	H8	3809	B2	3814	F4	3819	G5	3827	B4	3853	A4	3860	G4	3865	D7	4808	C14	6811	G11	7816	I5
2813	A3	2822	A3	2829	G5	2838	A4	2865	I13	3701	I5	3711	I7	3717	G2	3732	I5	3759	H10	3777	D9	3810	G5	3816	E7	3823	A4	3828	B3	3855	D2	3861	G4	3867	A4	5800	I12	6812	B2		



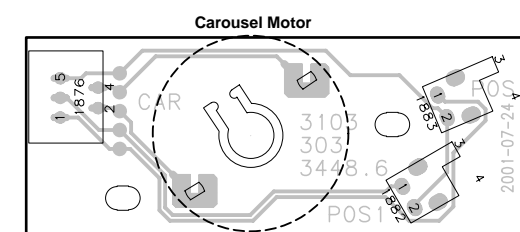
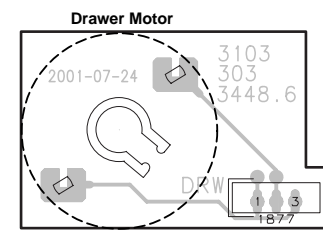
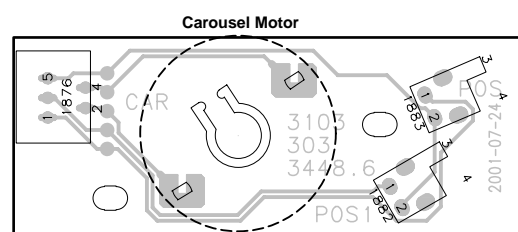
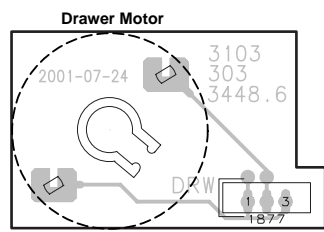
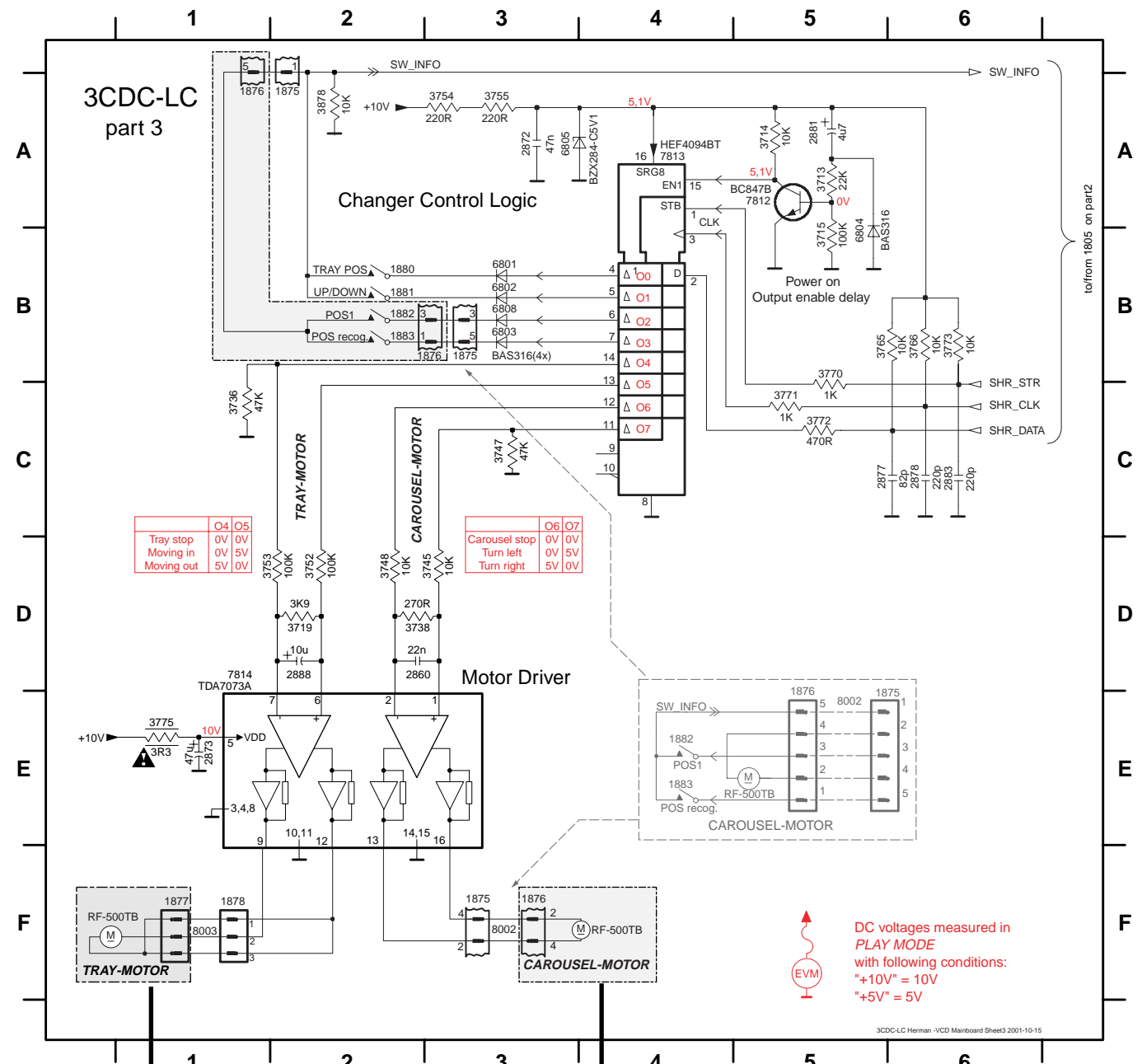
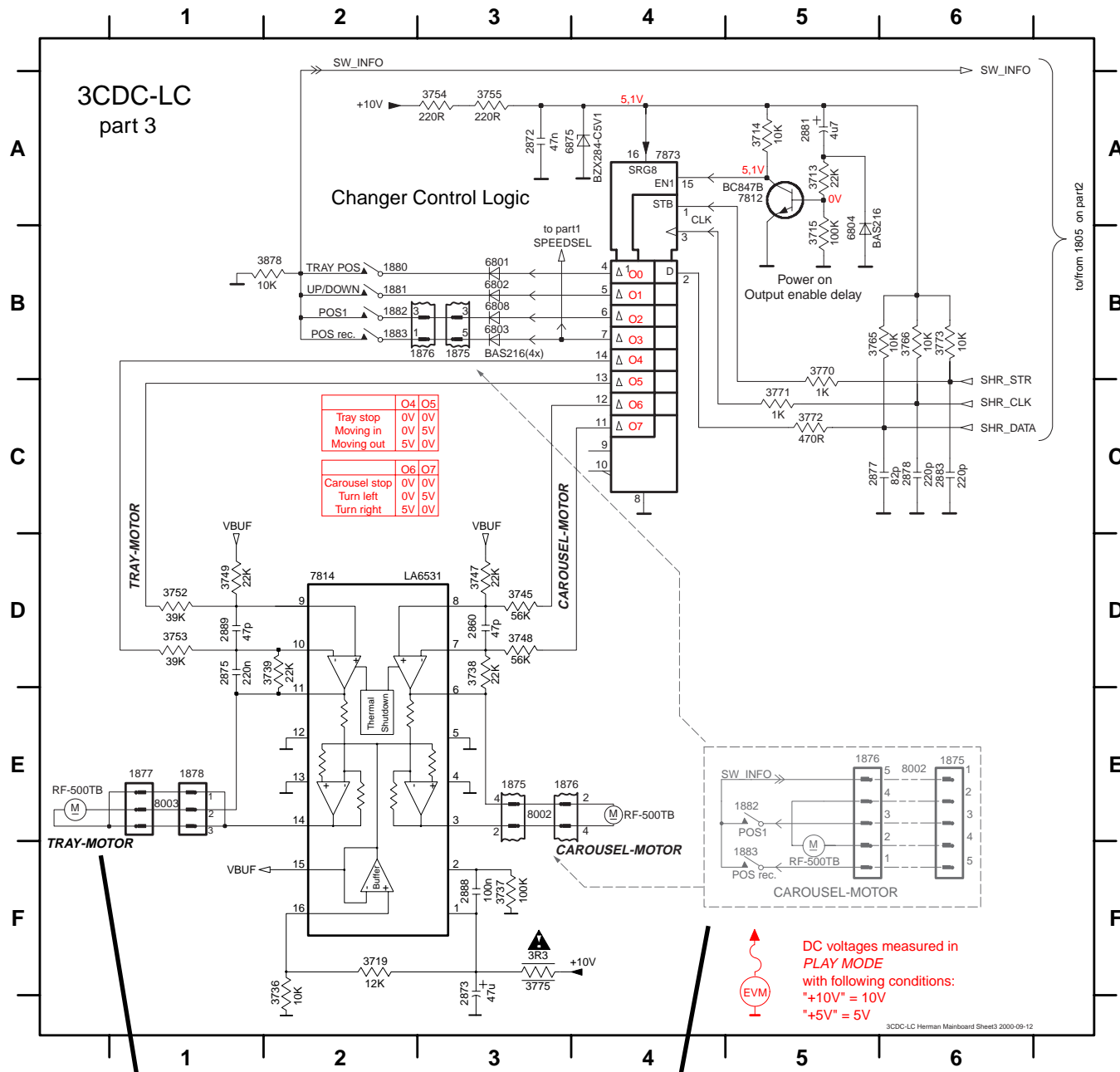
... V DC voltages measured in PLAY MODE with following conditions:  
 "+10V" = 10V  
 "+5V" = 5V

Layout stage .1

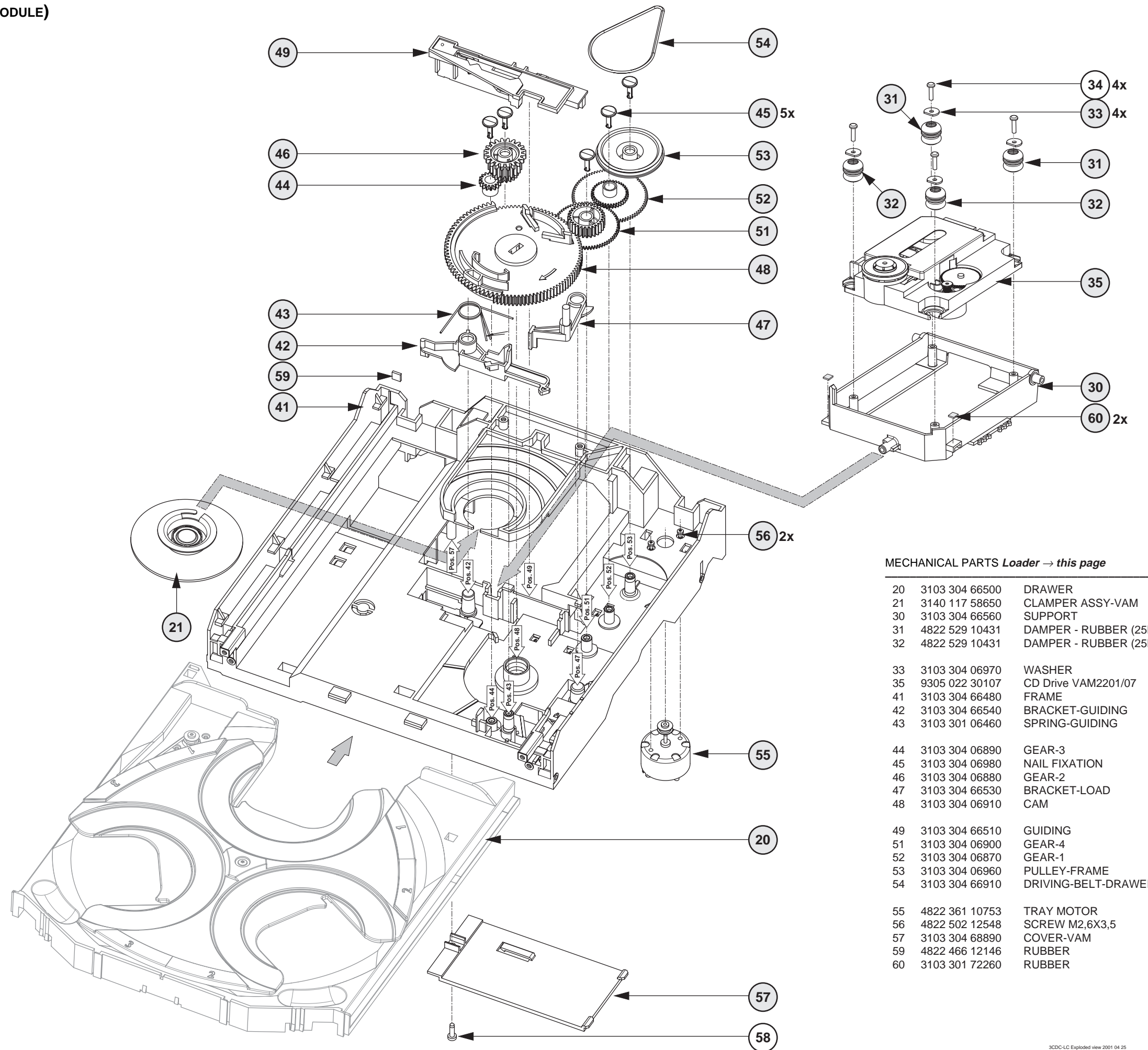
Layout stage .2

1875 B3	1876 E3	1880 B2	1883 B2	2873 F3	2881 A5	3713 A5	3736 F2	3745 D3	3752 D1
1875 E3	1876 E5	1881 B2	1883 F5	2875 D1	2883 C6	3714 A5	3737 F3	3747 D3	3753 D1
1875 E6	1877 D1	1882 B2	2860 D3	2877 C6	2888 F3	3715 B5	3738 D3	3748 D3	3754 A3
1876 B3	1878 E1	1882 E5	2872 A3	2878 C6	2889 D1	3719 F2	3739 D2	3749 D1	3755 A3

1875 F3	1876 B3	1880 B2	1883 E4	2878 C6	2881 A5	3714 A5	3745 D3	3754 A3	3771 C5	6801 B3	6808 B3	8003 F1
1875 E5	1876 F3	1881 B2	2860 D2	2881 A5	3715 B5	3747 D3	3748 D3	3755 A3	3772 C5	6802 B3	7812 A5	
1875 B3	1876 E5	1882 B2	2872 A3	2883 C6	3719 F2	3737 F3	3748 D3	3765 B6	3773 B6	6803 B3	7813 A4	
1875 A2	1877 F1	1882 E4	2873 E1	2888 D2	3736 C1	3752 D2	3766 B6	3775 E1	3776 B6	6804 B5	7814 E1	
1876 A1	1878 F1	1883 B2	2877 C6	3713 A5	3738 D2	3753 D2	3770 C5	3878 A2	3878 A2	6805 A4	8002 E5	



EXPLODED VIEW (3CDC-LC MODULE)

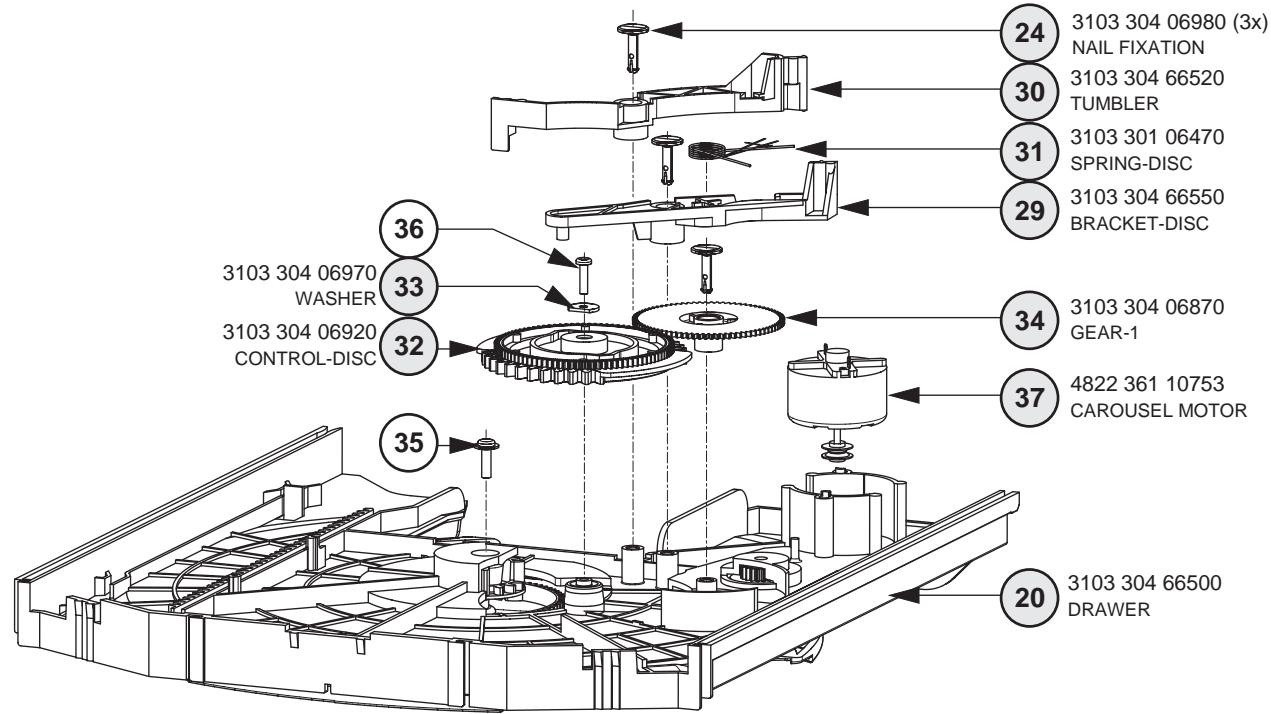


**X** spare part  
**Y** non spare part

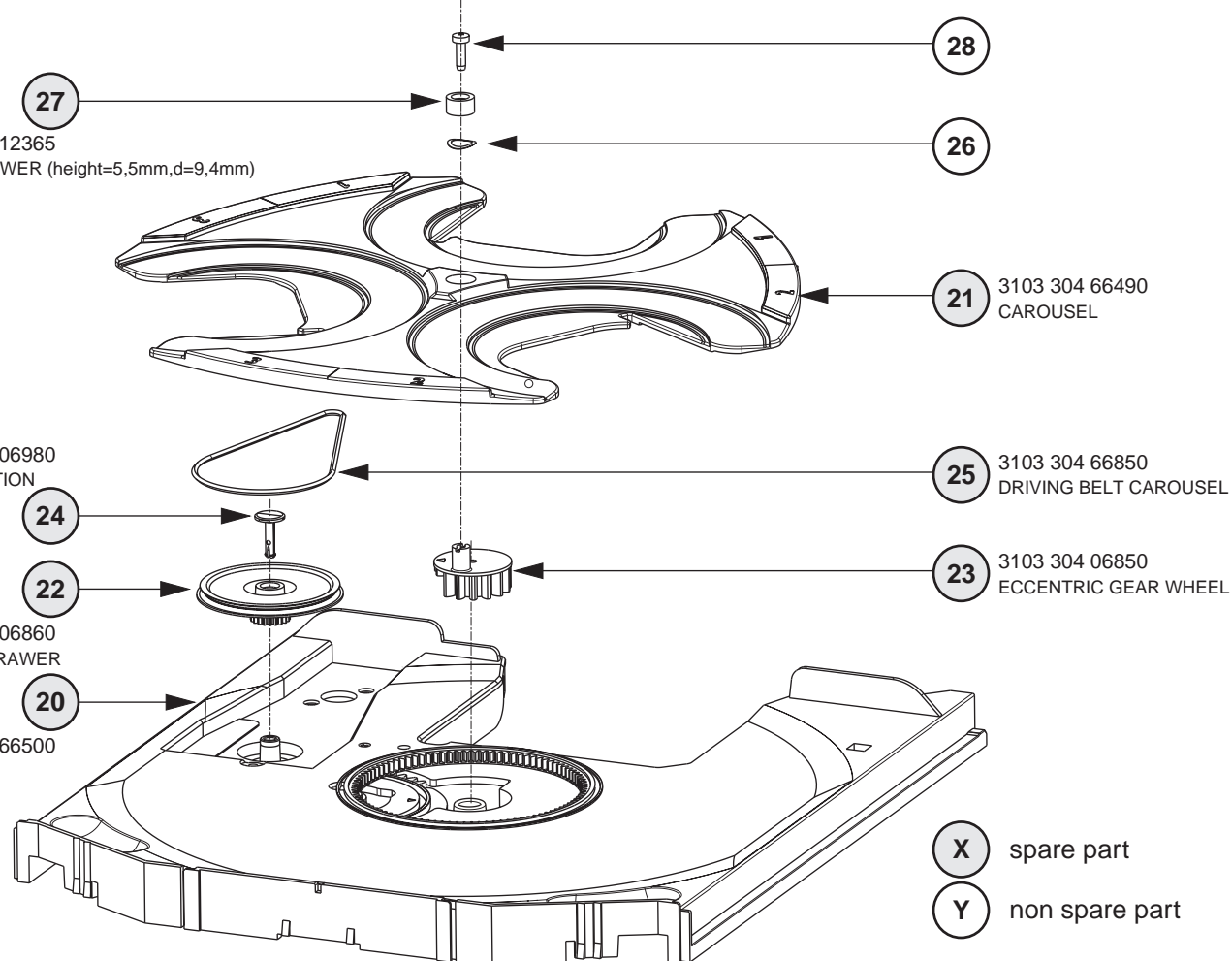
MECHANICAL PARTS *Loader* → *this page*

20	3103 304 66500	DRAWER
21	3140 117 58650	CLAMPER ASSY-VAM
30	3103 304 66560	SUPPORT
31	4822 529 10431	DAMPER - RUBBER (25DEG)
32	4822 529 10431	DAMPER - RUBBER (25DEG)
33	3103 304 06970	WASHER
35	9305 022 30107	CD Drive VAM2201/07
41	3103 304 66480	FRAME
42	3103 304 66540	BRACKET-GUIDING
43	3103 301 06460	SPRING-GUIDING
44	3103 304 06890	GEAR-3
45	3103 304 06980	NAIL FIXATION
46	3103 304 06880	GEAR-2
47	3103 304 66530	BRACKET-LOAD
48	3103 304 06910	CAM
49	3103 304 66510	GUIDING
51	3103 304 06900	GEAR-4
52	3103 304 06870	GEAR-1
53	3103 304 06960	PULLEY-FRAME
54	3103 304 66910	DRIVING-BELT-DRAWER
55	4822 361 10753	TRAY MOTOR
56	4822 502 12548	SCREW M2,6X3,5
57	3103 304 68890	COVER-VAM
59	4822 466 12146	RUBBER
60	3103 301 72260	RUBBER

**Drawer bottom view**



**Drawer top view**



**ELECTRICAL PARTSLIST 3CDC-LC-VCD MODULE Layout stage .1**

MISCELLANEOUS

35	9305 022 30107	CD Drive VAM2201/07
37	4822 361 10753	CAROUSEL MOTOR
55	4822 361 10753	TRAY MOTOR
1800	4822 265 10925	FLEX FOIL CONNECTOR 15P
1802	2422 025 16837	FLEX FOIL CONNECTOR 22P
1805	4822 265 10979	FLEX FOIL CONNECTOR 15P
1875	4822 267 10958	FLEX FOIL CONNECTOR 5P
1876	2422 025 08332	FLEX FOIL CONNECTOR 5P
1880	4822 276 13503	SWITCH, Tray position
1881	4822 276 13503	SWITCH, Drive up/down
1882	4822 276 13503	SWITCH, Position 1 recognized
1883	4822 276 13503	SWITCH, valid position recognized
8002	3103 308 91990	FLEX FOIL CABLE 5P, 200mm
8005	3103 308 91980	FLEX FOIL CABLE 15P, 170mm

CAPACITORS

2800	4822 126 10326	180pF	5%	
2801	4822 126 13883	220pF	5%	50V
2802	4822 126 14508	180pF	5%	50V
2803	4822 126 13883	220pF	5%	50V
2804	4822 126 13193	4,7nF	10%	63V
2805	4822 126 13883	220pF	5%	50V
2806	4822 126 13883	220pF	5%	50V
2807	5322 122 31863	330pF	5%	50V
2808	4822 126 13883	220pF	5%	50V
2809	4822 126 13879	220nF	20%	16V

2810	4822 126 10326	180pF	5%	
2811	4822 126 13883	220pF	5%	50V
2812	3198 017 34730	47nF	10%	16V
2813	4822 122 33177	10nF	20%	50V
2814	4822 122 33216	270pF	5%	50V

2815	4822 126 14076	220nF	20%	25V
2816	4822 126 13344	1,5nF	5%	63V
2817	4822 124 40769	4,7µF	20%	100V
2818	4822 126 13344	1,5nF	5%	63V
2819	4822 124 40769	4,7µF	20%	100V

2820	5322 126 11578	1nF	10%	63V
2822	2238 786 11554	2,2nF	5%	16V
2823	4822 126 13956	68pF	5%	63V
2824	4822 126 13751	47nF	10%	50V
2826	4822 124 12362	47µF	20%	4V

2827	5322 122 34099	470pF	10%	63V
2828	4822 124 12362	47µF	20%	4V
2829	4822 126 11669	27pF	10%	50V
2831	4822 126 13751	47nF	10%	50V
2833	4822 126 11671	33pF	5%	50V

2834	4822 126 11671	33pF	5%	50V
2835	3198 017 34730	47nF	10%	16V
2836	4822 124 40769	4,7µF	20%	100V
2837	4822 124 22726	4,7µF	20%	35V
2839	4822 124 40433	47µF	20%	25V

2840	4822 126 13751	47nF	10%	50V
2841	4822 122 33575	220pF	5%	50V
2842	4822 126 13883	220pF	5%	50V
2843	4822 126 14585	100nF	10%	50V
2844	5322 126 10794	220pF	10%	

2845	5322 124 41948	0,47µF	20%	50V
2846	5322 124 41948	0,47µF	20%	50V
2859	4822 126 14076	220nF	20%	25V
2860	4822 122 33777	47pF	5%	63V
2866	4822 126 13751	47nF	10%	50V

2872	3198 017 34730	47nF	10%	16V
2873	4822 124 80231	47µF	20%	16V
2875	4822 126 13879	220nF	20%	16V
2877	4822 126 14226	82pF		50V
2878	4822 126 13883	220pF	5%	50V

CAPACITORS

2881	4822 124 40769	4,7µF	20%	100V
2883	4822 126 13883	220pF	5%	50V
2884	5322 126 11578	1nF	10%	63V
2885	4822 126 14585	100nF	10%	50V
2886	4822 126 14585	100nF	10%	50V

2887	5322 126 11578	1nF	10%	63V
2888	4822 126 14585	100nF	10%	50V
2889	4822 122 33777	47pF	5%	63V

RESISTORS

3700	4822 117 10837	100kΩ	1%	0,1W
3702	4822 117 10833	10kΩ	1%	0,1W
3703	4822 051 10102	1kΩ	2%	0,25W
3704	4822 117 10837	100kΩ	1%	0,1W
3709	4822 051 20472	4,7kΩ	5%	0,1W

3710	4822 117 10833	10kΩ	1%	0,1W
3713	4822 051 30223	22kΩ	5%	0,06W
3714	4822 051 30103	10kΩ	5%	0,06W
3715	4822 117 13632	100kΩ	1%	0,06W
3719	4822 051 30123	12kΩ	5%	0,06W

3720	4822 051 20154	150kΩ	5%	0,1W
3721	4822 117 11449	2,2kΩ	1%	0,1W
3722	4822 117 11449	2,2kΩ	1%	0,1W
3724	4822 117 10837	100kΩ	1%	0,1W
3725	4822 051 20471	470Ω	5%	0,1W

3726	4822 117 11373	100Ω	1%	0,1W
3727	4822 117 11449	2,2kΩ	1%	0,1W
3728	4822 117 10837	100kΩ	1%	0,1W
3729	4822 051 20471	470Ω	5%	0,1W
3730	4822 051 20333	33kΩ	5%	0,1W

3735	4822 117 11373	100Ω	1%	0,1W
3736	4822 051 30103	10kΩ	5%	0,06W
3737	4822 117 13632	100kΩ	1%	0,06W
3738	4822 051 30223	22kΩ	5%	0,06W
3739	4822 051 30223	22kΩ	5%	0,06W

3745	4822 051 30563	56kΩ	5%	0,06W
3747	4822 051 30223	22kΩ	5%	0,06W
3748	4822 051 30563	56kΩ	5%	0,06W
3749	4822 051 30223	22kΩ	5%	0,06W
3752	4822 051 30393	39kΩ	5%	0,06W

3753	4822 051 30393	39kΩ	5%	0,06W
3754	4822 117 11503	220Ω	5%	0,1W
3755	4822 117 11503	220Ω	5%	0,1W
3765	4822 051 30103	10kΩ	5%	0,06W
3766	4822 117 10833	10kΩ	1%	0,1W

3767	4822 051 30339	33Ω	5%	0,06W
3769	4822 051 30101	100Ω	5%	0,06W
3770	4822 051 30102	1kΩ	5%	0,06W
3771	4822 051 30102	1kΩ	5%	0,06W
3772	4822 051 30471	470Ω	5%	0,06W

3773	4822 117 10833	10kΩ	1%	0,1W
3775	4822 052 10338	3,3Ω		NFR25
3776	4822 051 30103	10kΩ	5%	0,06W
3777	4822 051 30103	10kΩ	5%	0,06W
3800	4822 051 30563	56kΩ	5%	0,06W

3801	4822 051 30103	10kΩ	5%	0,06W
3802	4822 117 11148	56kΩ	1%	0,1W
3803	4822 117 10833	10kΩ	1%	0,1W
3805	4822 051 30103	10kΩ	5%	0,06W
3806	4822 051 30103	10kΩ	5%	0,06W

3807	4822 051 30103	10kΩ	5%	0,06W
3808	4822 051 30103	10kΩ	5%	0,06W
3809	4822 051 30103	10kΩ	5%	0,06W
3810	4822 051 30471	470Ω	5%	0,06W
3811	4822 051 20273	27kΩ	5%	0,1W

**ELECTRICAL PARTSLIST 3CDC-LC-VCD MODULE Layout stage .1**

## RESISTORS

3812©	4822 051 20471	470Ω	5%	0,1W
3813©	4822 051 20471	470Ω	5%	0,1W
3814©	4822 051 20471	470Ω	5%	0,1W
3815▲	4822 052 10478	4,7Ω	5%	NFR
3816©	4822 051 20471	470Ω	5%	0,1W
3817©	4822 051 30471	470Ω	5%	0,06W
3818©	4822 117 11373	100Ω	1%	0,1W
3819©	4822 051 20471	470Ω	1%	0,1W
3820©	4822 051 30472	4,7kΩ	5%	0,06W
3821©	4822 051 20472	4,7kΩ	5%	0,1W
3822©	4822 051 30272	2,7kΩ	5%	0,06W
3823©	4822 051 30102	1kΩ	5%	0,06W
3824©	4822 051 30102	1kΩ	5%	0,06W
3825©	4822 051 10102	1kΩ	2%	0,25W
3826©	4822 051 20223	22kΩ	5%	0,1W
3827©	4822 051 20273	27kΩ	5%	0,1W
3828©	4822 051 30223	22kΩ	5%	0,06W
3829©	4822 117 13608	4,7Ω	5%	0,06W
3830©	4822 116 83933	15kΩ	1%	0,1W
3832©	4822 117 10833	10kΩ	1%	0,1W
3833©	4822 051 30223	22kΩ	5%	0,06W
3834©	4822 051 20223	22kΩ	5%	0,1W
3835▲	4822 052 10108	1Ω	5%	NFR
3837©	4822 117 10833	10kΩ	1%	0,1W
3838©	4822 051 30103	10kΩ	5%	0,06W
3839©	4822 051 20273	27kΩ	5%	0,1W
3841©	4822 051 20273	27kΩ	5%	0,1W
3842©	4822 117 10834	47kΩ	1%	0,1W
3843©	4822 117 10834	47kΩ	1%	0,1W
3844©	4822 117 12864	82kΩ	5%	0,6W
3845©	4822 117 10834	47kΩ	1%	0,1W
3846©	4822 117 10834	47kΩ	1%	0,1W
3847©	4822 117 11148	56kΩ	1%	0,1W
3848©	4822 117 10837	100kΩ	1%	0,1W
3850©	4822 051 30183	18kΩ	5%	0,06W
3852©	4822 051 10102	1kΩ	2%	0,25W
3853©	4822 051 20471	470Ω	5%	0,1W
3854©	4822 051 30101	100Ω	5%	0,06W
3855©	4822 117 12971	15Ω	5%	0,06W
3856©	4822 117 12521	68Ω	1%	0,1W
3857©	4822 117 12521	68Ω	1%	0,1W
3860©	4822 117 10833	10kΩ	1%	0,1W
3862©	4822 051 20121	120Ω	5%	0,1W
3863©	4822 051 30339	33Ω	5%	0,06W
3864©	4822 051 30101	100Ω	5%	0,06W
3865©	4822 051 30121	120Ω	5%	0,06W
3866©	4822 051 30103	10kΩ	5%	0,06W
3871©	4822 117 11149	82kΩ	1%	0,1W
3872©	4822 051 20472	4,7kΩ	5%	0,1W
3878©	4822 051 20008	CHIP JUMPER	0805	
3881©	4822 117 11503	220Ω	5%	0,1W
4707©	4822 051 20008	CHIP JUMPER	0805	
4708©	4822 051 20008	CHIP JUMPER	0805	
4709©	4822 051 20008	CHIP JUMPER	0805	
4710©	4822 051 20008	CHIP JUMPER	0805	
4711©	4822 051 20008	CHIP JUMPER	0805	
4713©	4822 051 20008	CHIP JUMPER	0805	
4714©	4822 051 20008	CHIP JUMPER	0805	
4717©	4822 051 30008	CHIP JUMPER	0603	
4724©	4822 051 20008	CHIP JUMPER	0805	
4726©	4822 051 20008	CHIP JUMPER	0805	
4727©	4822 051 20008	CHIP JUMPER	0805	
4728©	4822 051 20008	CHIP JUMPER	0805	
4729©	4822 051 20008	CHIP JUMPER	0805	
4730©	4822 051 20008	CHIP JUMPER	0805	

## RESISTORS

4731©	4822 051 30008	CHIP JUMPER	0603	
4732©	4822 051 20008	CHIP JUMPER	0805	
4733©	4822 051 30008	CHIP JUMPER	0603	
4734©	4822 051 20008	CHIP JUMPER	0805	
4735©	4822 051 20008	CHIP JUMPER	0805	
4736©	4822 051 30008	CHIP JUMPER	0603	
4737©	4822 051 30008	CHIP JUMPER	0603	
4738©	4822 051 30008	CHIP JUMPER	0603	
4739©	4822 051 30008	CHIP JUMPER	0603	
4740©	4822 051 30008	CHIP JUMPER	0603	
4743©	4822 051 20008	CHIP JUMPER	0805	
4744©	4822 051 30008	CHIP JUMPER	0603	
4745©	4822 051 20008	CHIP JUMPER	0805	
4746©	4822 051 20008	CHIP JUMPER	0805	
4747©	4822 051 20008	CHIP JUMPER	0805	
4748©	4822 051 20008	CHIP JUMPER	0805	
4749©	4822 051 30008	CHIP JUMPER	0603	
4800©	4822 051 30008	CHIP JUMPER	0603	
4801©	4822 051 30008	CHIP JUMPER	0603	
4804©	4822 051 20008	CHIP JUMPER	0805	
4805©	4822 051 30008	CHIP JUMPER	0603	
4806©	4822 051 20008	CHIP JUMPER	0805	
4820©	4822 051 20008	CHIP JUMPER	0805	
4823©	4822 051 30008	CHIP JUMPER	0603	
4824©	4822 051 30008	CHIP JUMPER	0603	
4826©	4822 051 20008	CHIP JUMPER	0805	
4828©	4822 051 30008	CHIP JUMPER	0603	
4829©	4822 051 20008	CHIP JUMPER	0805	
4830©	4822 051 20008	CHIP JUMPER	0805	
4831©	4822 051 20008	CHIP JUMPER	0805	
4832©	4822 051 30008	CHIP JUMPER	0603	
4833©	4822 051 20008	CHIP JUMPER	0805	
4834©	4822 051 20008	CHIP JUMPER	0805	
4835©	4822 051 20008	CHIP JUMPER	0805	
4836©	4822 051 20008	CHIP JUMPER	0805	
4837©	4822 051 20008	CHIP JUMPER	0805	
4838©	4822 051 30008	CHIP JUMPER	0603	
4839©	4822 051 20008	CHIP JUMPER	0805	
4840©	4822 051 20008	CHIP JUMPER	0805	
4841©	4822 051 20008	CHIP JUMPER	0805	
4842©	4822 051 20008	CHIP JUMPER	0805	
4843©	4822 051 20008	CHIP JUMPER	0805	
4844©	4822 051 20008	CHIP JUMPER	0805	
4845©	4822 051 20008	CHIP JUMPER	0805	
4846©	4822 051 20008	CHIP JUMPER	0805	
4847©	4822 051 20008	CHIP JUMPER	0805	
4848©	4822 051 20008	CHIP JUMPER	0805	
4849©	4822 051 30008	CHIP JUMPER	0603	
4850©	4822 051 20008	CHIP JUMPER	0805	
4851©	4822 051 20008	CHIP JUMPER	0805	
4854©	4822 051 30008	CHIP JUMPER	0603	
4855©	4822 051 20008	CHIP JUMPER	0805	
4856©	4822 051 20008	CHIP JUMPER	0805	
4857©	4822 051 30008	CHIP JUMPER	0603	
4859©	4822 051 20008	CHIP JUMPER	0805	
4861©	4822 051 20008	CHIP JUMPER	0805	
4863©	4822 051 20008	CHIP JUMPER	0805	
4864©	4822 051 20008	CHIP JUMPER	0805	
4865©	4822 051 30008	CHIP JUMPER	0603	
4866©	4822 051 20008	CHIP JUMPER	0805	
4867©	4822 051 30008	CHIP JUMPER	0603	
4868©	4822 051 20008	CHIP JUMPER	0805	
4869©	4822 051 20008	CHIP JUMPER	0805	
4870©	4822 051 20008	CHIP JUMPER	0805	
4871©	4822 051 20008	CHIP JUMPER	0805	

**ELECTRICAL PARTSLIST 3CDC-LC-VCD MODULE Layout stage .1****RESISTORS**


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4872©	4822 051 20008	CHIP JUMPER 0805
4873©	4822 051 20008	CHIP JUMPER 0805
4874©	4822 051 20008	CHIP JUMPER 0805
4875©	4822 051 20008	CHIP JUMPER 0805
4876©	4822 051 20008	CHIP JUMPER 0805
4877©	4822 051 30008	CHIP JUMPER 0603
4879©	4822 051 20008	CHIP JUMPER 0805
4884©	4822 051 20008	CHIP JUMPER 0805
4885©	4822 051 20008	CHIP JUMPER 0805
4886©	4822 051 20008	CHIP JUMPER 0805
4887©	4822 051 30008	CHIP JUMPER 0603
4888©	4822 051 20008	CHIP JUMPER 0805
4889©	4822 051 20008	CHIP JUMPER 0805
4890©	4822 051 20008	CHIP JUMPER 0805
4891©	4822 051 30008	CHIP JUMPER 0603
4892©	4822 051 20008	CHIP JUMPER 0805
4893©	4822 051 20008	CHIP JUMPER 0805
4894©	4822 051 20008	CHIP JUMPER 0805
4895©	4822 051 20008	CHIP JUMPER 0805
4896©	4822 051 20008	CHIP JUMPER 0805
4897©	4822 051 20008	CHIP JUMPER 0805
4898©	4822 051 20008	CHIP JUMPER 0805

**COILS**


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1810	4822 242 10849	CRYSTAL 8,46MHz
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**DIODES**


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6801©	4822 130 11397	BAS316
6802©	4822 130 11397	BAS316
6803©	4822 130 11397	BAS316
6804©	4822 130 11397	BAS316
6805	4822 130 11383	BZX284-C5V1
6807	4822 130 11366	BZX284-C3V9
6808©	4822 130 11397	BAS316
6810	4800 130 31878	1N4003G
6811©	4822 130 82334	BAS85
6812©	4822 130 80446	BAS32L

**TRANSISTORS**


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7806©	4822 130 60511	BC847B
7812©	4822 130 60511	BC847B
7815©	4822 130 60511	BC847B
7820©	4822 130 60511	BC847B
7821©	4822 130 60511	BC847B
7822	4822 130 42131	BF550
7823©	4822 130 60511	BC847B

**INTEGRATED CIRCUITS**


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7801©	9352 622 36118	TZA1025T/V2 HF-Amplifier
7802©	9352 641 81557	SAA7327M2B Signal processor
7803©	9322 158 56682	M63000SP MOTOR DRIVER
7813©	5322 209 11306	HEF4094BT, SHIFT REGISTER
7814	4822 209 32636	LA6531, MOTOR DRIVER

**ELECTRICAL PARTSLIST 3CDC-LC-VCD MODULE Layout stage .2****MISCELLANEOUS**

35	9305 022 30107	CD Drive VAM2201/07
37	4822 361 10753	CAROUSEL MOTOR
55	4822 361 10753	TRAY MOTOR
1800	4822 265 10925	FLEX FOIL CONNECTOR 15P
1802	2422 025 16837	FLEX FOIL CONNECTOR 22P
1805	4822 265 10979	FLEX FOIL CONNECTOR 15P
1805	4822 265 11545	FLEX FOIL CONNECTOR 19P for digital out
1875	4822 267 10958	FLEX FOIL CONNECTOR 5P
1876	2422 025 08332	FLEX FOIL CONNECTOR 5P
1880	4822 276 13503	SWITCH, Tray position
1881	4822 276 13503	SWITCH, Drive up/down
1882	4822 276 13503	SWITCH, Position 1 recognized
1883	4822 276 13503	SWITCH, valid position recognized
8002	3103 308 91990	FLEX FOIL CABLE 5P, 200mm
8005	3103 308 91980	FLEX FOIL CABLE 15P, 170mm

**CAPACITORS**

2800©	4822 126 10326	180pF	5%	50V
2801©	4822 126 13883	220pF	5%	50V
2802©	4822 126 14508	180pF	5%	50V
2803©	4822 126 13883	220pF	5%	50V
2804©	4822 126 13193	4,7nF	10%	63V
2805©	4822 126 13883	220pF	5%	50V
2806©	4822 126 13883	220pF	5%	50V
2807©	5322 122 31863	330pF	5%	50V
2808©	4822 126 13883	220pF	5%	50V
2809©	4822 126 13879	220nF	20%	16V
2810©	4822 126 10326	180pF	5%	50V
2811©	4822 126 13883	220pF	5%	50V
2812©	3198 017 34730	47nF	10%	16V
2813©	4822 122 33177	10nF	20%	50V
2814©	4822 122 33216	270pF	5%	50V
2815©	4822 126 14076	220nF	20%	25V
2816©	4822 126 13344	1,5nF	5%	63V
2817	4822 124 40769	4,7µF	20%	100V
2818©	4822 126 13344	1,5nF	5%	63V
2819	4822 124 40769	4,7µF	20%	100V
2820©	5322 126 11578	1nF	10%	63V
2822©	2238 786 11554	2,2nF	5%	16V
2823©	4822 126 13956	68pF	5%	63V
2824©	4822 126 13751	47nF	10%	50V
2826	4822 124 12362	47µF	20%	4V
2827©	5322 122 34099	470pF	10%	63V
2828	4822 124 12362	47µF	20%	4V
2829©	4822 126 11669	27pF	10%	50V
2831©	4822 126 13751	47nF	10%	50V
2833©	4822 126 11671	33pF	5%	50V
2834©	4822 126 11671	33pF	5%	50V
2835©	3198 017 34730	47nF	10%	16V
2836	4822 124 40769	4,7µF	20%	100V
2837	4822 124 22726	4,7µF	20%	35V
2839	4822 124 40433	47µF	20%	25V
2840©	4822 126 13751	47nF	10%	50V
2841©	4822 122 33575	220pF	5%	50V
2842©	4822 126 13883	220pF	5%	50V
2843©	4822 126 14585	100nF	10%	50V
2844©	5322 126 10794	220pF	10%	50V
2845	5322 124 41948	0,47µF	20%	50V
2846	5322 124 41948	0,47µF	20%	50V
2859©	4822 126 14076	220nF	20%	25V
2860©	4822 126 14494	22nF	10%	25V
2864©	5322 122 33538	150pF	5%	63V
2865©	5322 122 32654	22nF	10%	63V
2866©	4822 126 13751	47nF	10%	50V
2872©	3198 017 34730	47nF	10%	16V
2873	4822 124 80231	47µF	20%	16V
2874©	4822 126 14305	100nF	10%	16V

**CAPACITORS**

2877©	4822 126 14226	82pF		50V
2878©	4822 126 13883	220pF	5%	50V
2881	4822 124 40769	4,7µF	20%	100V
2883©	4822 126 13883	220pF	5%	50V
2884©	5322 126 11578	1nF	10%	63V
2885©	4822 126 14585	100nF	10%	50V
2886©	4822 126 14585	100nF	10%	50V
2887©	5322 126 11578	1nF	10%	63V
2888	4822 124 11947	10µF	20%	16V

**RESISTORS**

3700©	4822 117 10837	100kΩ	1%	0,1W
3702©	4822 117 10833	10kΩ	1%	0,1W
3703©	4822 051 10102	1kΩ	2%	0,25W
3704©	4822 117 10837	100kΩ	1%	0,1W
3709©	4822 051 20472	4,7kΩ	5%	0,1W
3710©	4822 117 10833	10kΩ	1%	0,1W
3712©	4822 051 30109	10Ω	5%	0,06W
3713©	4822 051 30223	22kΩ	5%	0,06W
3714©	4822 051 30103	10kΩ	5%	0,06W
3715©	4822 117 13632	100kΩ	1%	0,06W
3716©	4822 051 30101	100Ω	5%	0,06W
3717©	4822 117 12917	1Ω	5%	0,06W
3719©	4822 051 30392	3,9kΩ	5%	0,06W
3720©	4822 051 20154	150kΩ	5%	0,1W
3721©	4822 117 11449	2,2kΩ	1%	0,1W
3722©	4822 117 11449	2,2kΩ	1%	0,1W
3724©	4822 117 10837	100kΩ	1%	0,1W
3725©	4822 051 20471	470Ω	5%	0,1W
3726©	4822 117 11373	100Ω	1%	0,1W
3727©	4822 117 11449	2,2kΩ	1%	0,1W
3728©	4822 117 10837	100kΩ	1%	0,1W
3729©	4822 051 20471	470Ω	5%	0,1W
3730©	4822 051 20333	33kΩ	5%	0,1W
3735©	4822 117 11373	100Ω	1%	0,1W
3736©	4822 117 12925	47kΩ	1%	0,06W
3738©	4822 051 30271	270Ω	5%	0,06W
3745©	4822 117 10833	10kΩ	1%	0,1W
3747©	4822 117 12925	47kΩ	1%	0,06W
3748©	4822 051 30103	10kΩ	5%	0,06W
3752©	4822 117 13632	100kΩ	1%	0,06W
3753©	4822 117 13632	100kΩ	1%	0,06W
3754©	4822 117 11503	220Ω	5%	0,1W
3755©	4822 117 11503	220Ω	5%	0,1W
3759©	4822 051 20109	10Ω	5%	0,1W
3765©	4822 051 30103	10kΩ	5%	0,06W
3766©	4822 117 10833	10kΩ	1%	0,1W
3767©	4822 051 30339	33Ω	5%	0,06W
3769©	4822 051 30101	100Ω	5%	0,06W
3770©	4822 051 30102	1kΩ	5%	0,06W
3771©	4822 051 30102	1kΩ	5%	0,06W
3772©	4822 051 30471	470Ω	5%	0,06W
3773©	4822 117 10833	10kΩ	1%	0,1W
3775▲	4822 052 10338	3,3Ω	5%	NFR25
3776©	4822 051 30103	10kΩ	5%	0,06W
3777©	4822 051 30103	10kΩ	5%	0,06W
3800©	4822 051 30563	56kΩ	5%	0,06W
3801©	4822 051 30103	10kΩ	5%	0,06W
3802©	4822 117 11148	56kΩ	1%	0,1W
3803©	4822 117 10833	10kΩ	1%	0,1W
3804©	4822 051 30103	10kΩ	5%	0,06W
3805©	4822 051 30103	10kΩ	5%	0,06W
3806©	4822 051 30103	10kΩ	5%	0,06W
3807©	4822 051 30103	10kΩ	5%	0,06W
3808©	4822 051 30103	10kΩ	5%	0,06W
3809©	4822 051 30103	10kΩ	5%	0,06W



**ELECTRICAL PARTSLIST 3CDC-LC-VCD MODULE Layout stage .2**

## RESISTORS

3810	4822 051 30471	470Ω	5%	0,06W
3811	4822 051 20273	27kΩ	5%	0,1W
3812	4822 051 20471	470Ω	5%	0,1W
3813	4822 051 20471	470Ω	5%	0,1W
3814	4822 051 20471	470Ω	5%	0,1W
3815	4822 052 10478	4,7Ω	5%	NFR25
3816	4822 051 20471	470Ω	5%	0,1W
3817	4822 051 30471	470Ω	5%	0,06W
3818	4822 051 30101	100Ω	5%	0,06W
3818	4822 051 30471	470Ω	5%	0,06W
3819	4822 051 20471	470Ω	5%	0,1W
3820	4822 051 30472	4,7kΩ	5%	0,06W
3821	4822 051 20472	4,7kΩ	5%	0,1W
3822	4822 051 30272	2,7kΩ	5%	0,06W
3823	4822 051 30102	1kΩ	5%	0,06W
3824	4822 051 30102	1kΩ	5%	0,06W
3825	4822 051 10102	1kΩ	2%	0,25W
3826	4822 051 20223	22kΩ	5%	0,1W
3827	4822 051 20273	27kΩ	5%	0,1W
3828	4822 051 30223	22kΩ	5%	0,06W
3829	4822 117 13608	4,7Ω	5%	0,06W
3830	4822 116 83933	15kΩ	1%	0,1W
3832	4822 117 10833	10kΩ	1%	0,1W
3833	4822 051 30223	22kΩ	5%	0,06W
3834	4822 051 20223	22kΩ	5%	0,1W
3835	4822 052 10108	1Ω	5%	0,33W
3837	4822 117 10833	10kΩ	1%	0,1W
3838	4822 051 30103	10kΩ	5%	0,06W
3839	4822 051 20273	27kΩ	5%	0,1W
3841	4822 051 20273	27kΩ	5%	0,1W
3842	4822 117 10834	47kΩ	1%	0,1W
3843	4822 117 10834	47kΩ	1%	0,1W
3844	4822 117 12864	82kΩ	5%	0,6W
3845	4822 117 10834	47kΩ	1%	0,1W
3846	4822 117 10834	47kΩ	1%	0,1W
3847	4822 117 11148	56kΩ	1%	0,1W
3848	4822 117 10837	100kΩ	1%	0,1W
3850	4822 051 30183	18kΩ	5%	0,06W
3852	4822 051 10102	1kΩ	2%	0,25W
3853	4822 051 20471	470Ω	5%	0,1W
3854	4822 051 30101	100Ω	5%	0,06W
3855	4822 117 12971	15Ω	5%	0,06W
3856	4822 117 12521	68Ω	1%	0,1W
3857	4822 117 12521	68Ω	1%	0,1W
3860	4822 117 10833	10kΩ	1%	0,1W
3862	4822 051 20121	120Ω	5%	0,1W
3863	4822 051 30339	33Ω	5%	0,06W
3864	4822 051 30101	100Ω	5%	0,06W
3865	4822 051 30121	120Ω	5%	0,06W
3866	4822 051 30103	10kΩ	5%	0,06W
3871	4822 117 11149	82kΩ	1%	0,1W
3872	4822 051 20472	4,7kΩ	5%	0,1W
3878	4822 117 11503	220Ω	5%	0,1W
3881	4822 117 11503	220Ω	5%	0,1W
4707	4822 051 20008	CHIP JUMPER 0805		
4708	4822 051 20008	CHIP JUMPER 0805		
4709	4822 051 20008	CHIP JUMPER 0805		
4710	4822 051 20008	CHIP JUMPER 0805		
4711	4822 051 20008	CHIP JUMPER 0805		
4713	4822 051 20008	CHIP JUMPER 0805		
4714	4822 051 20008	CHIP JUMPER 0805		
4717	4822 051 30008	CHIP JUMPER 0603		
4724	4822 051 20008	CHIP JUMPER 0805		
4726	4822 051 20008	CHIP JUMPER 0805		
4727	4822 051 20008	CHIP JUMPER 0805		

## RESISTORS

4728	4822 051 20008	CHIP JUMPER 0805	
4729	4822 051 20008	CHIP JUMPER 0805	
4730	4822 051 20008	CHIP JUMPER 0805	
4731	4822 051 30008	CHIP JUMPER 0603	
4732	4822 051 20008	CHIP JUMPER 0805	
4733	4822 051 30008	CHIP JUMPER 0603	
4734	4822 051 20008	CHIP JUMPER 0805	
4735	4822 051 20008	CHIP JUMPER 0805	
4736	4822 051 30008	CHIP JUMPER 0603	
4737	4822 051 30008	CHIP JUMPER 0603	
4738	4822 051 30008	CHIP JUMPER 0603	
4739	4822 051 30008	CHIP JUMPER 0603	
4740	4822 051 30008	CHIP JUMPER 0603	
4743	4822 051 20008	CHIP JUMPER 0805	
4744	4822 051 30008	CHIP JUMPER 0603	
4745	4822 051 20008	CHIP JUMPER 0805	
4746	4822 051 20008	CHIP JUMPER 0805	
4747	4822 051 20008	CHIP JUMPER 0805	
4748	4822 051 20008	CHIP JUMPER 0805	
4749	4822 051 30008	CHIP JUMPER 0603	
4800	4822 051 30008	CHIP JUMPER 0603	
4801	4822 051 30008	CHIP JUMPER 0603	
4803	4822 051 30008	CHIP JUMPER 0603	
4804	4822 051 20008	CHIP JUMPER 0805	
4805	4822 051 30008	CHIP JUMPER 0603	
4806	4822 051 20008	CHIP JUMPER 0805	
4820	4822 051 20008	CHIP JUMPER 0805	
4823	4822 051 30008	CHIP JUMPER 0603	
4824	4822 051 30008	CHIP JUMPER 0603	
4826	4822 051 20008	CHIP JUMPER 0805	
4828	4822 051 30008	CHIP JUMPER 0603	
4829	4822 051 20008	CHIP JUMPER 0805	
4830	4822 051 20008	CHIP JUMPER 0805	
4831	4822 051 20008	CHIP JUMPER 0805	
4832	4822 051 30008	CHIP JUMPER 0603	
4833	4822 051 20008	CHIP JUMPER 0805	
4834	4822 051 20008	CHIP JUMPER 0805	
4835	4822 051 20008	CHIP JUMPER 0805	
4836	4822 051 20008	CHIP JUMPER 0805	
4837	4822 051 20008	CHIP JUMPER 0805	
4838	4822 051 30008	CHIP JUMPER 0603	
4839	4822 051 20008	CHIP JUMPER 0805	
4840	4822 051 20008	CHIP JUMPER 0805	
4841	4822 051 20008	CHIP JUMPER 0805	
4842	4822 051 20008	CHIP JUMPER 0805	
4843	4822 051 20008	CHIP JUMPER 0805	
4844	4822 051 20008	CHIP JUMPER 0805	
4845	4822 051 20008	CHIP JUMPER 0805	
4846	4822 051 20008	CHIP JUMPER 0805	
4847	4822 051 20008	CHIP JUMPER 0805	
4848	4822 051 20008	CHIP JUMPER 0805	
4849	4822 051 30008	CHIP JUMPER 0603	
4850	4822 051 20008	CHIP JUMPER 0805	
4851	4822 051 20008	CHIP JUMPER 0805	
4854	4822 051 30008	CHIP JUMPER 0603	
4855	4822 051 20008	CHIP JUMPER 0805	
4856	4822 051 20008	CHIP JUMPER 0805	
4857	4822 051 30008	CHIP JUMPER 0603	
4859	4822 051 20008	CHIP JUMPER 0805	
4861	4822 051 20008	CHIP JUMPER 0805	
4863	4822 051 20008	CHIP JUMPER 0805	
4864	4822 051 20008	CHIP JUMPER 0805	
4865	4822 051 30008	CHIP JUMPER 0603	
4866	4822 051 20008	CHIP JUMPER 0805	
4867	4822 051 30008	CHIP JUMPER 0603	

***ELECTRICAL PARTSLIST 3CDC-LC-VCD MODULE Layout stage .2*****RESISTORS**

4868©	4822 051 20008	CHIP JUMPER 0805
4869©	4822 051 20008	CHIP JUMPER 0805
4870©	4822 051 20008	CHIP JUMPER 0805
4871©	4822 051 20008	CHIP JUMPER 0805
4872©	4822 051 20008	CHIP JUMPER 0805
4873©	4822 051 20008	CHIP JUMPER 0805
4874©	4822 051 20008	CHIP JUMPER 0805
4875©	4822 051 20008	CHIP JUMPER 0805
4876©	4822 051 20008	CHIP JUMPER 0805
4877©	4822 051 30008	CHIP JUMPER 0603
4879©	4822 051 20008	CHIP JUMPER 0805
4884©	4822 051 20008	CHIP JUMPER 0805
4885©	4822 051 20008	CHIP JUMPER 0805
4886©	4822 051 20008	CHIP JUMPER 0805
4887©	4822 051 30008	CHIP JUMPER 0603
4888©	4822 051 20008	CHIP JUMPER 0805
4889©	4822 051 20008	CHIP JUMPER 0805
4890©	4822 051 20008	CHIP JUMPER 0805
4891©	4822 051 30008	CHIP JUMPER 0603
4892©	4822 051 20008	CHIP JUMPER 0805
4893©	4822 051 20008	CHIP JUMPER 0805
4894©	4822 051 20008	CHIP JUMPER 0805
4895©	4822 051 20008	CHIP JUMPER 0805
4896©	4822 051 20008	CHIP JUMPER 0805
4897©	4822 051 20008	CHIP JUMPER 0805
4898©	4822 051 20008	CHIP JUMPER 0805

**COILS**

1810	4822 242 10849	CRYSTAL 8,46MHz
5802	2422 536 00019	TRANSFORMER, DIGITAL OUT

**DIODES**

6801©	4822 130 11397	BAS316
6802©	4822 130 11397	BAS316
6803©	4822 130 11397	BAS316
6804©	4822 130 11397	BAS316
6805©	4822 130 11383	BZX284-C5V1
6807©	4822 130 11366	BZX284-C3V9
6808©	4822 130 11397	BAS316
6810	4822 130 31878	1N4003G
6811©	4822 130 82334	BAS85
6812©	4822 130 80446	BAS32L
6813©	4822 130 11397	BAS316

**TRANSISTORS**

7806©	4822 130 60511	BC847B
7812©	4822 130 60511	BC847B
7815©	4822 130 60511	BC847B
7820©	4822 130 60511	BC847B
7821©	4822 130 60511	BC847B
7822	4822 130 42131	BF550
7823©	4822 130 60511	BC847B

**INTEGRATED CIRCUITS**

7801©	9352 622 36118	TZA1025T/V2 HF-Amplifier
7802©	9352 641 81557	SAA7327M2B Signal processor
7803©	9322 158 56682	M63000SP, MOTOR DRIVER
7813©	5322 209 11306	HEF4094BT, SHIFT REGISTER
7814	4822 209 32852	TDA7073A/N2

Technical remarks

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