Vestax

MULTITRACK REMIX CONTROLLER

VCM-600

SERVICE MANUAL

Vestax Corporation

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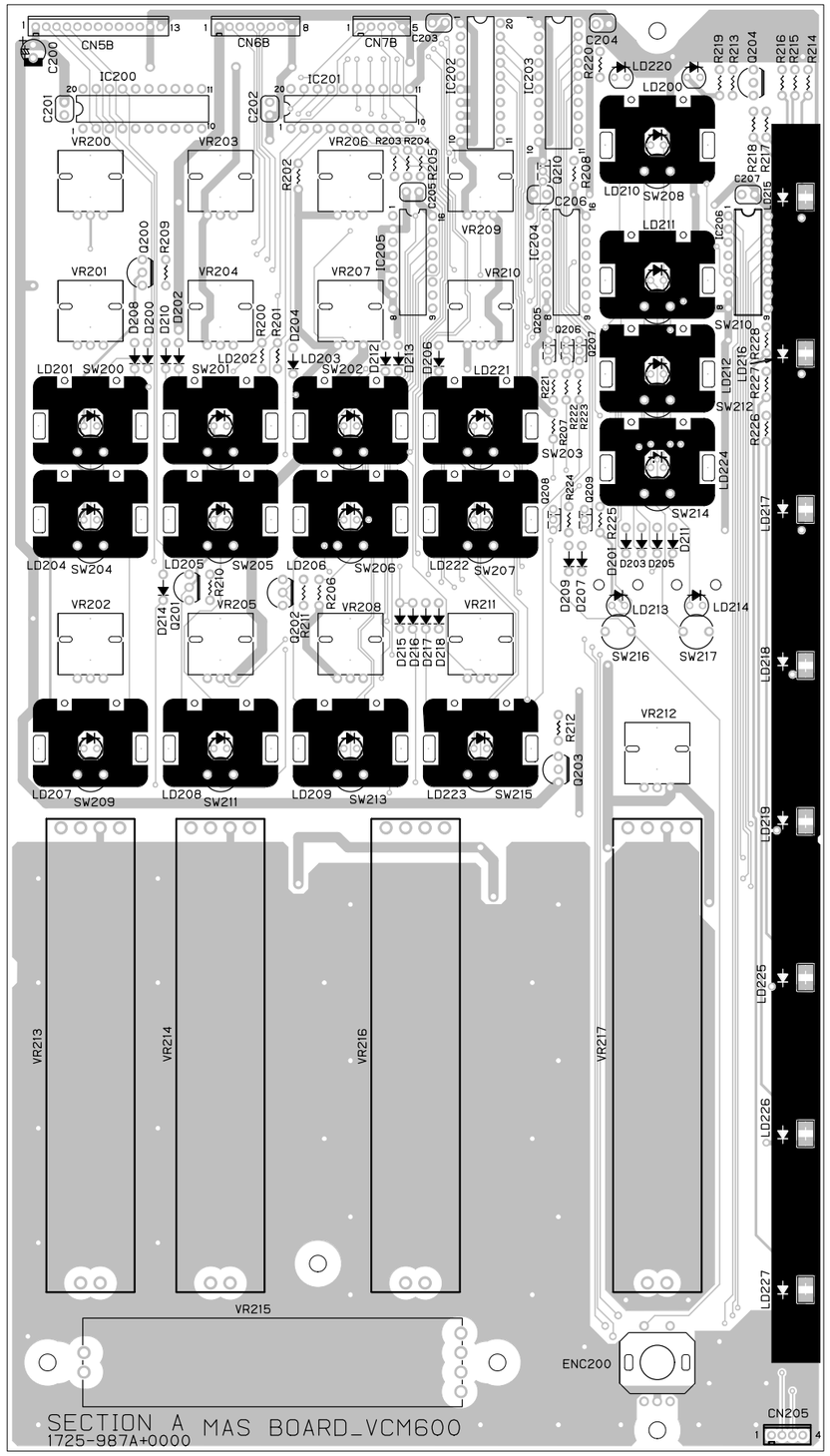
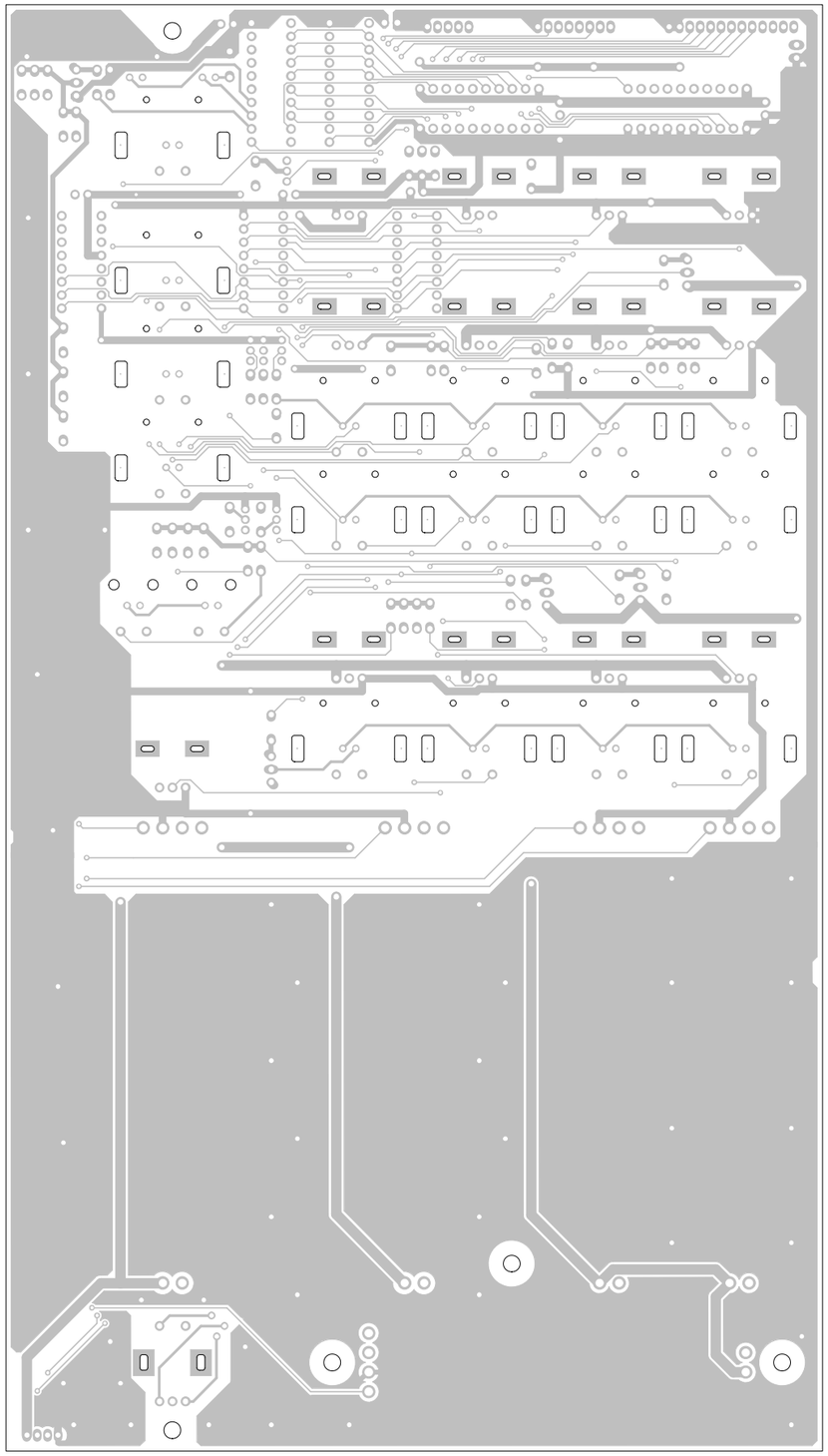
PCB LAYOUT

MASTER Board

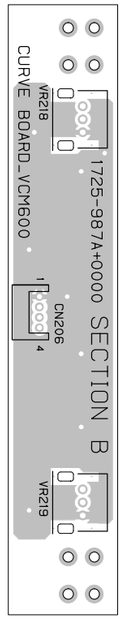


Top side

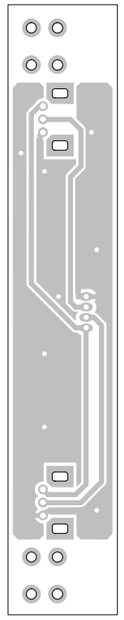


Bottom side

CURVE Board

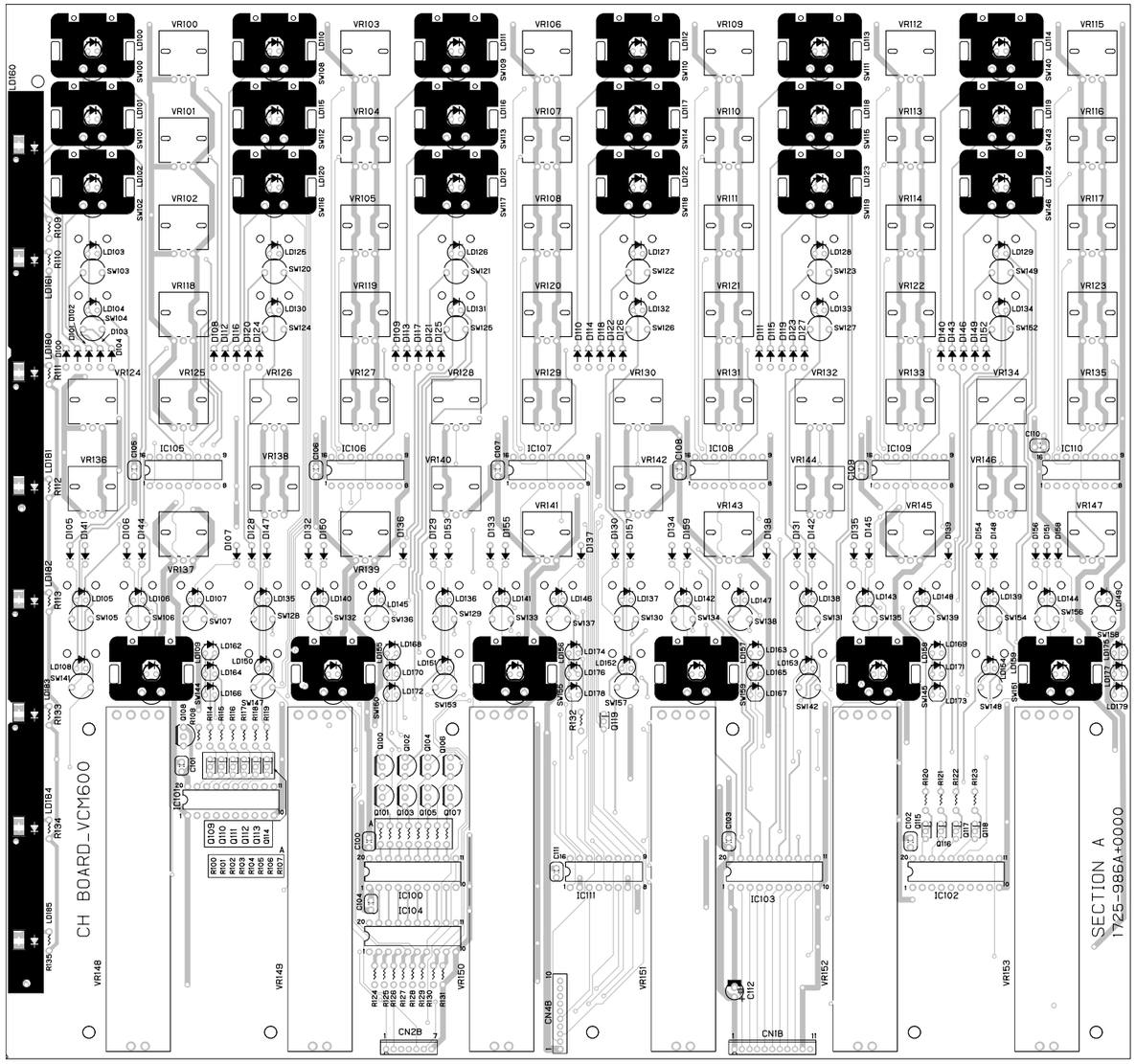


Top side

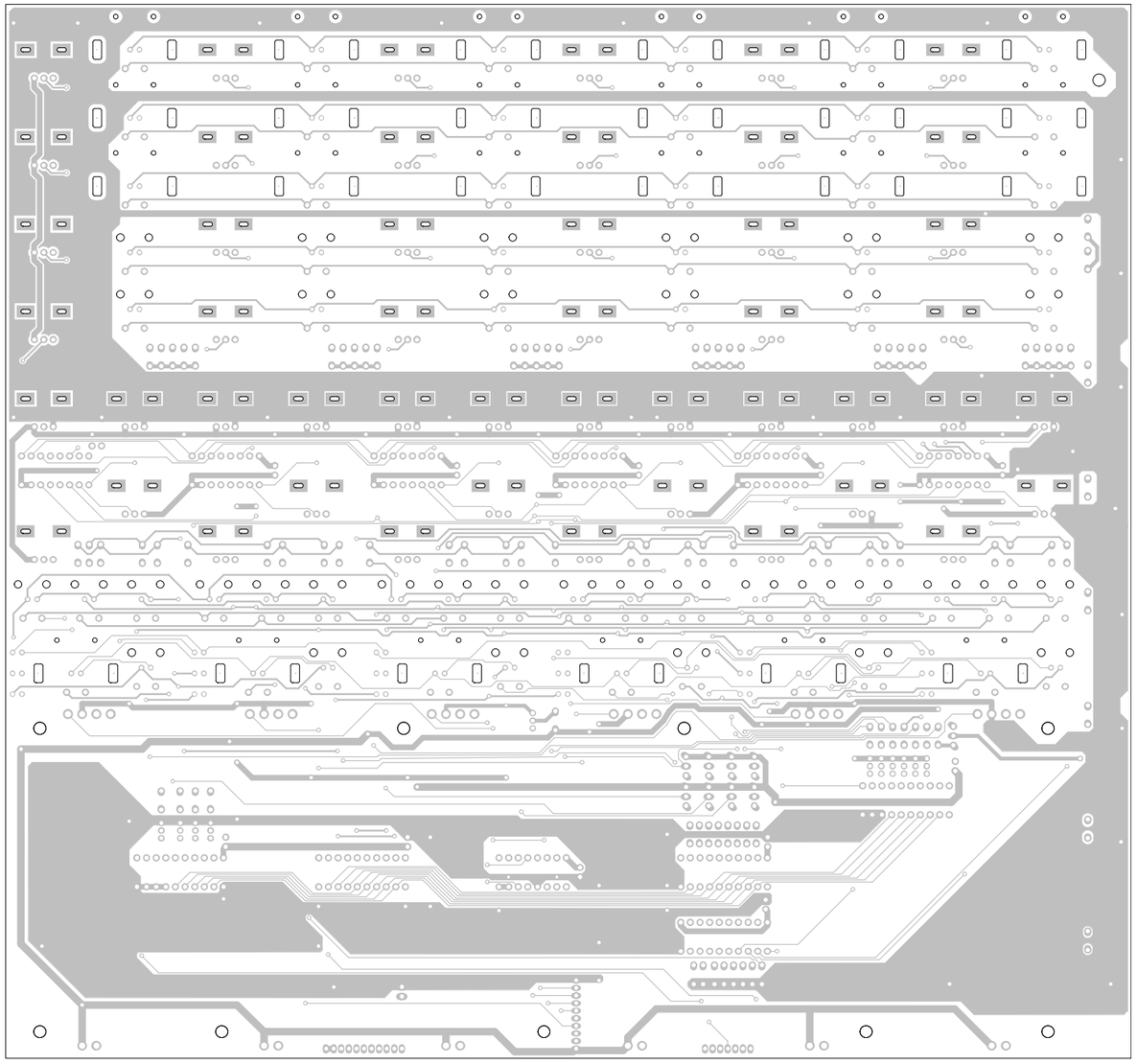


Bottom side

CHANNEL Board



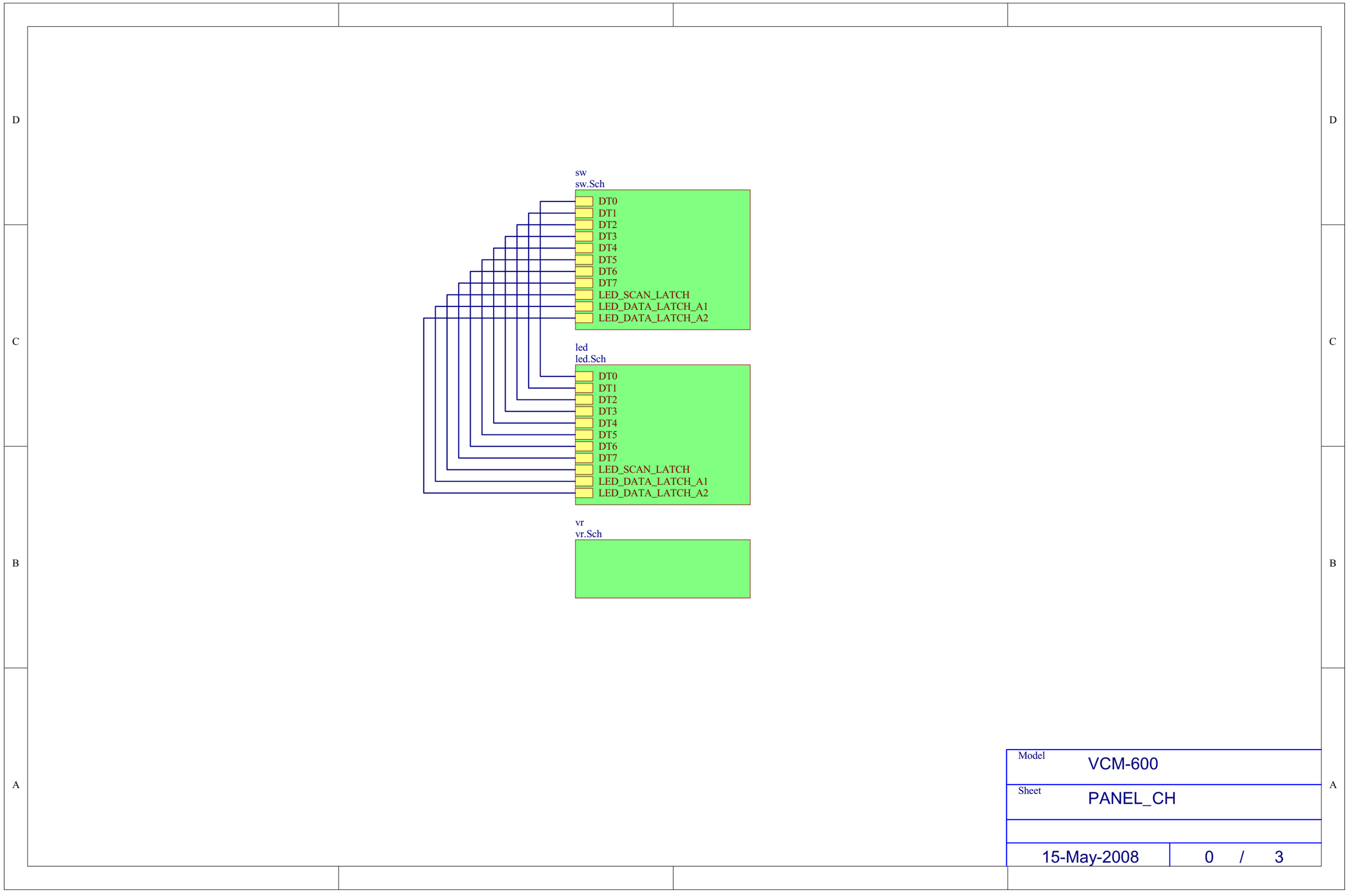
Top side



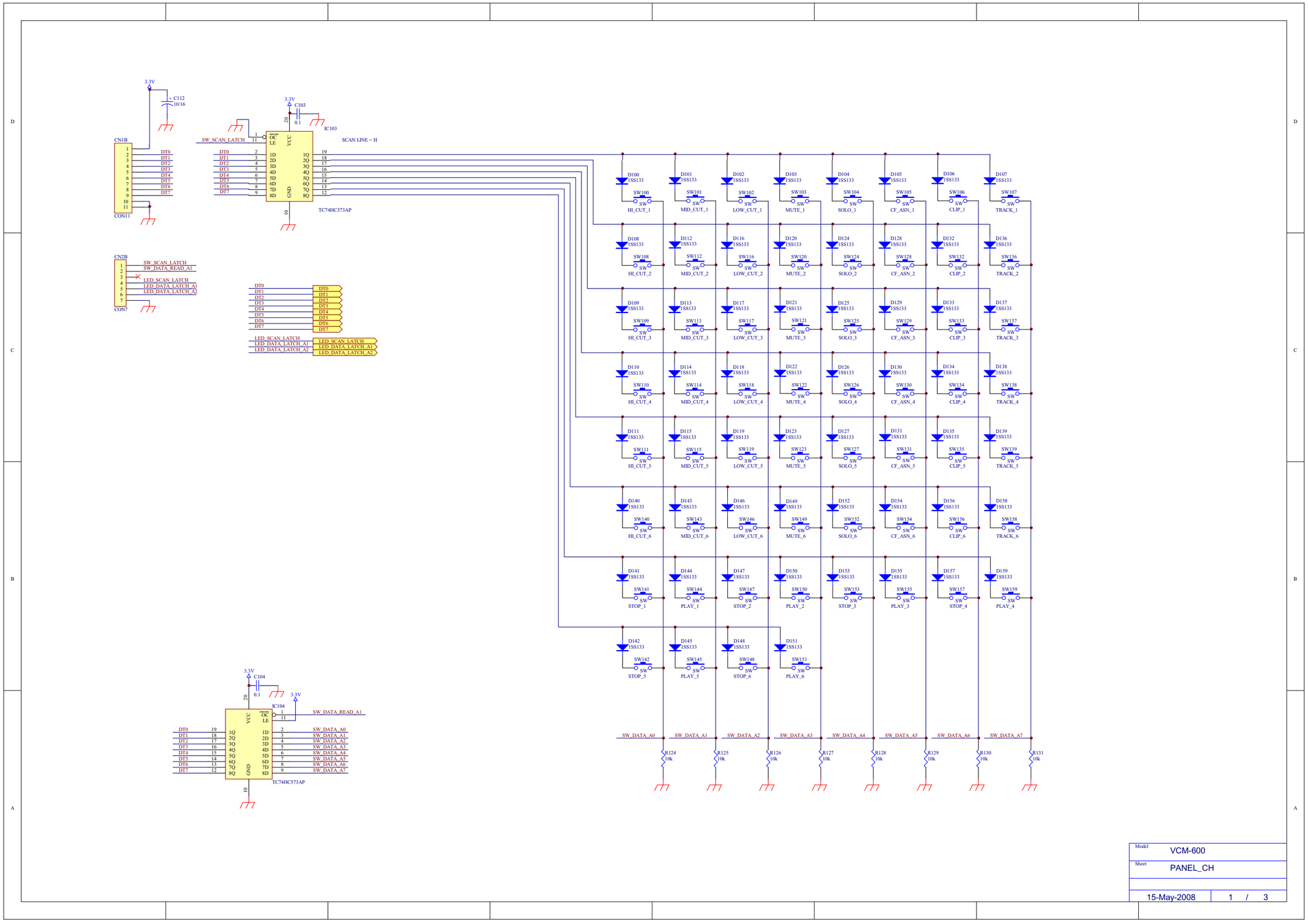
Bottom side

SCHEMATIC DIAGRAM

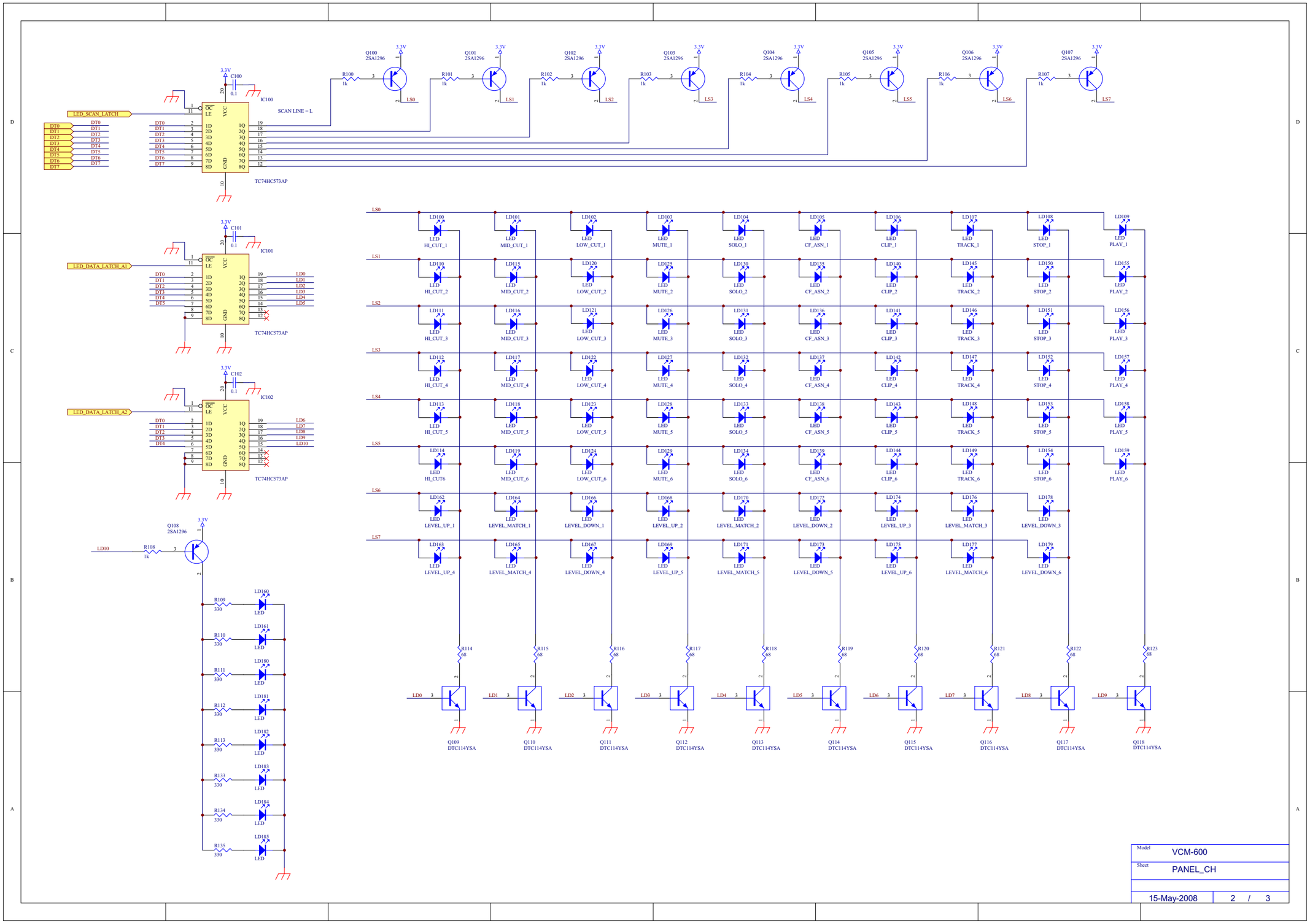
CHANNEL PANEL - *TOP*



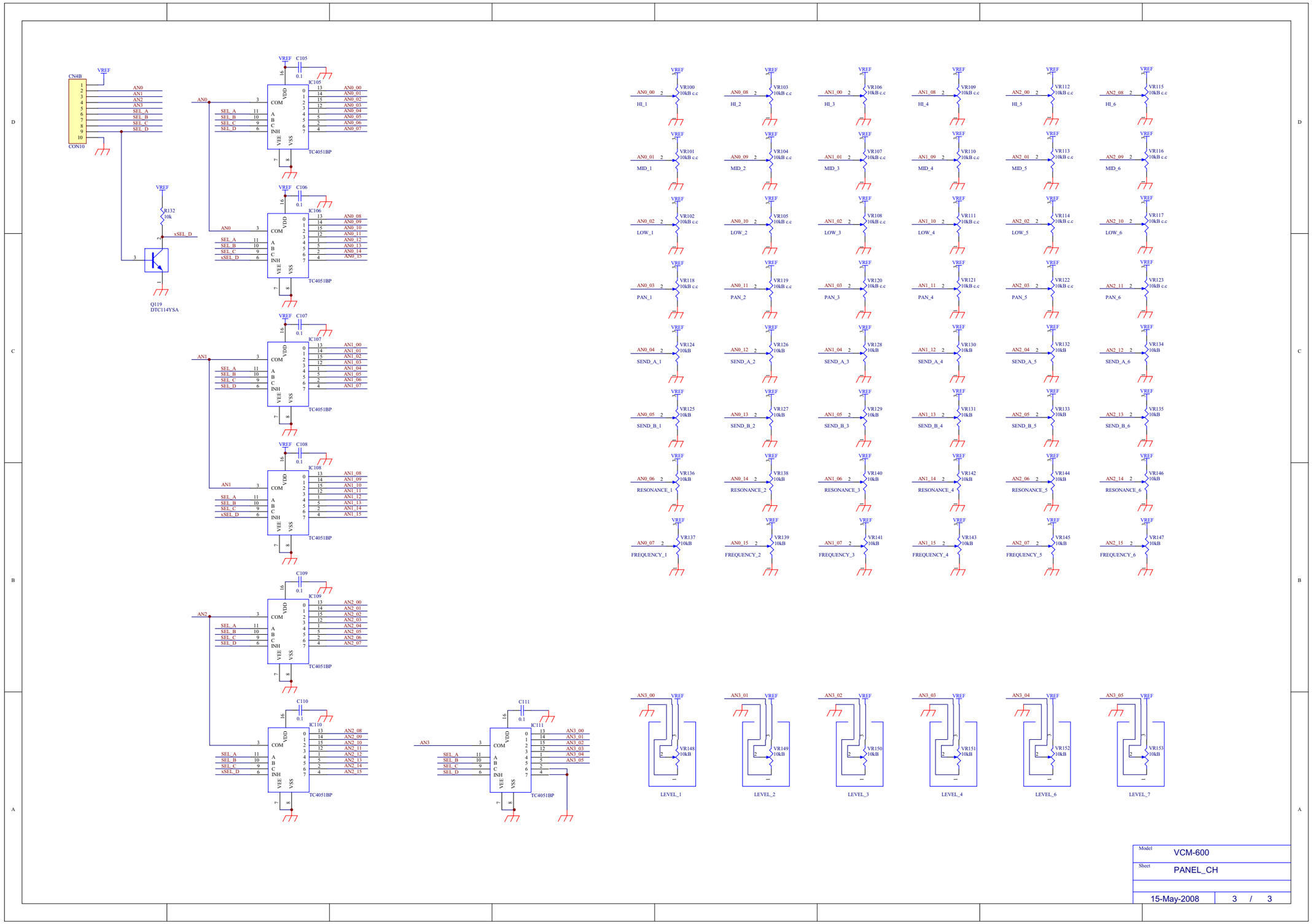
CHANNEL PANEL - *SW*



CHANNEL PANEL - *LED*



CHANNEL PANEL - *VR*



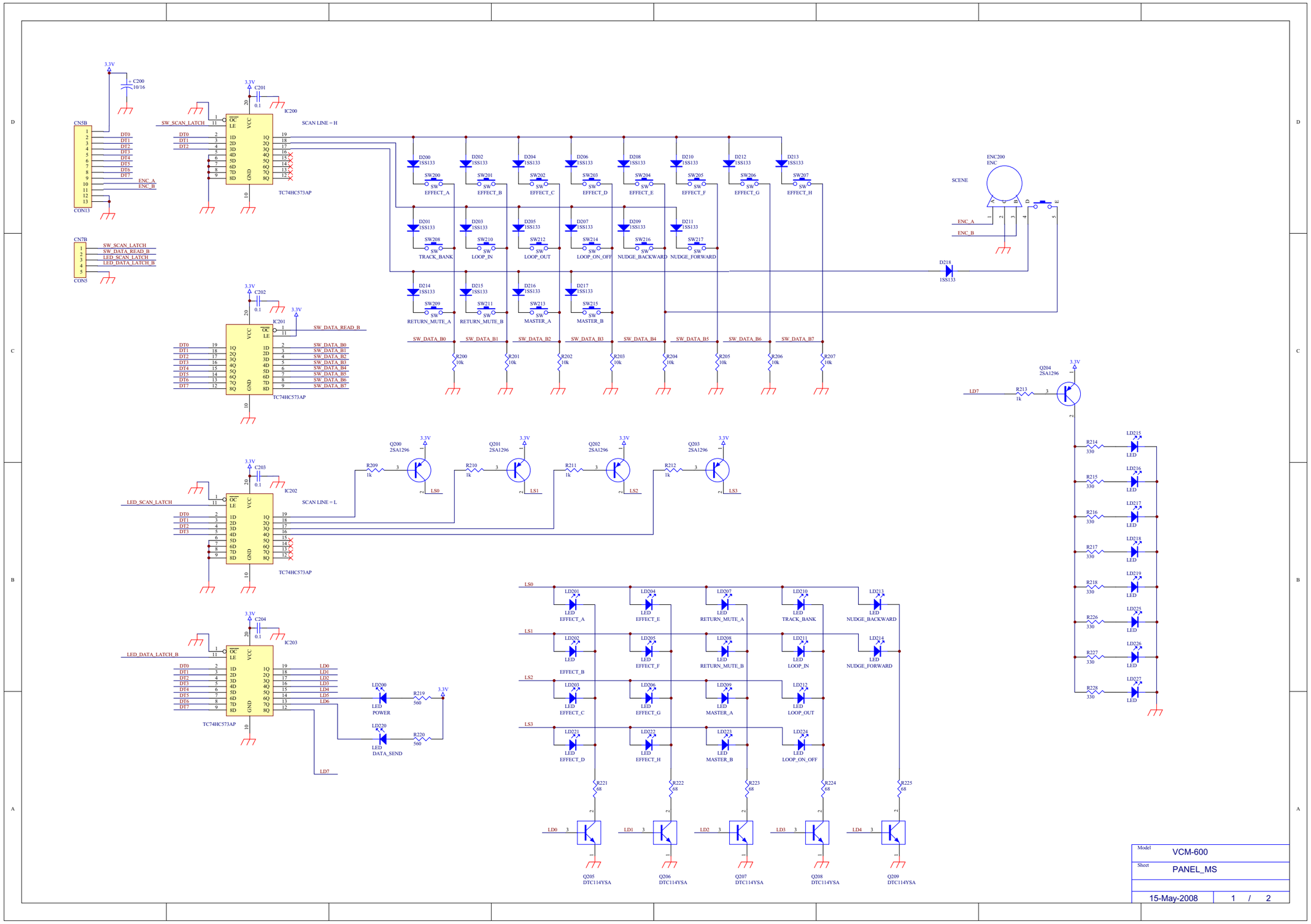
MS PANEL - *TOP*

sw_led
sw_led.Sch

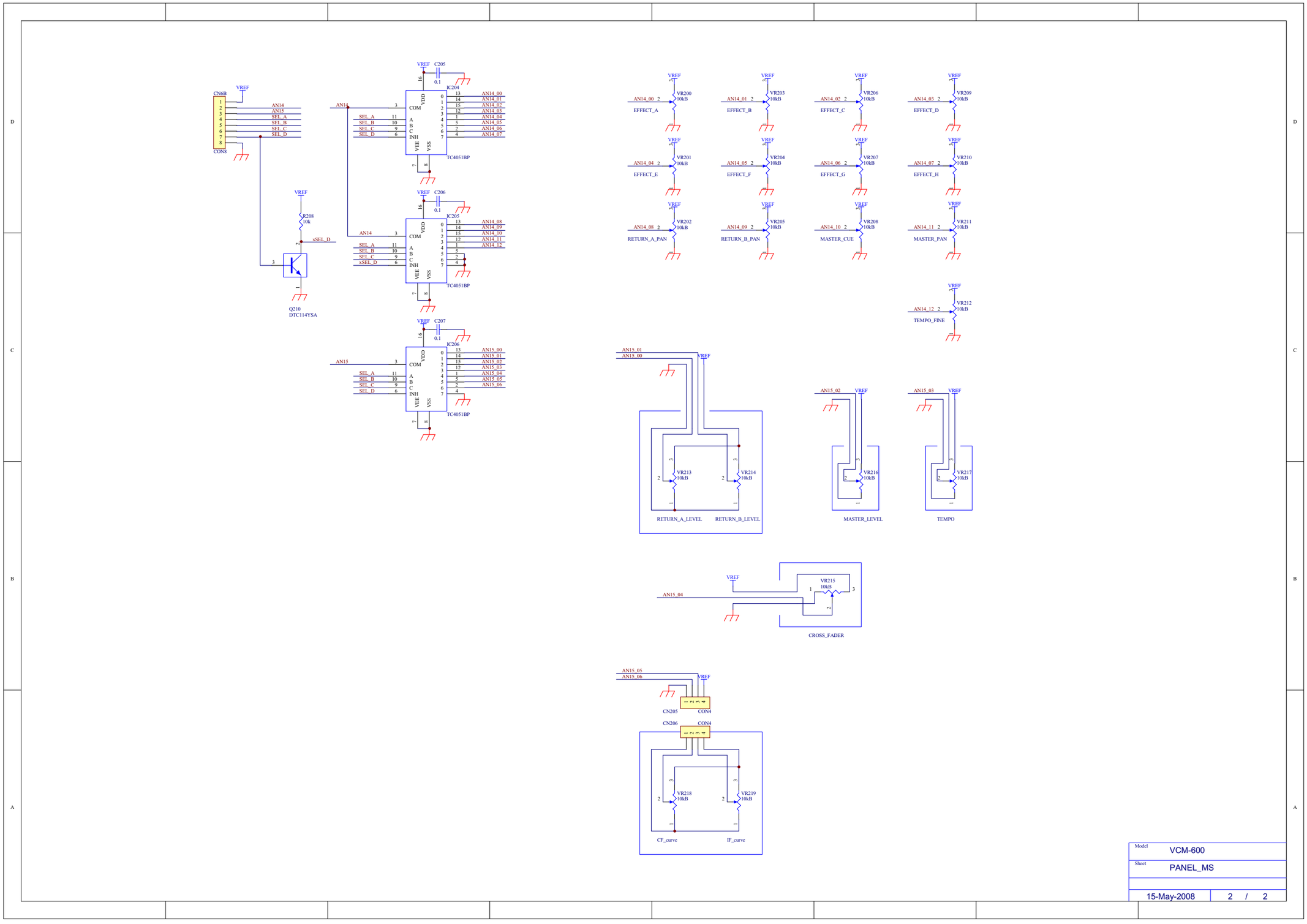
vr
vr.Sch

Model	VCM-600
Sheet	PANEL_MS
15-May-2008	0 / 2

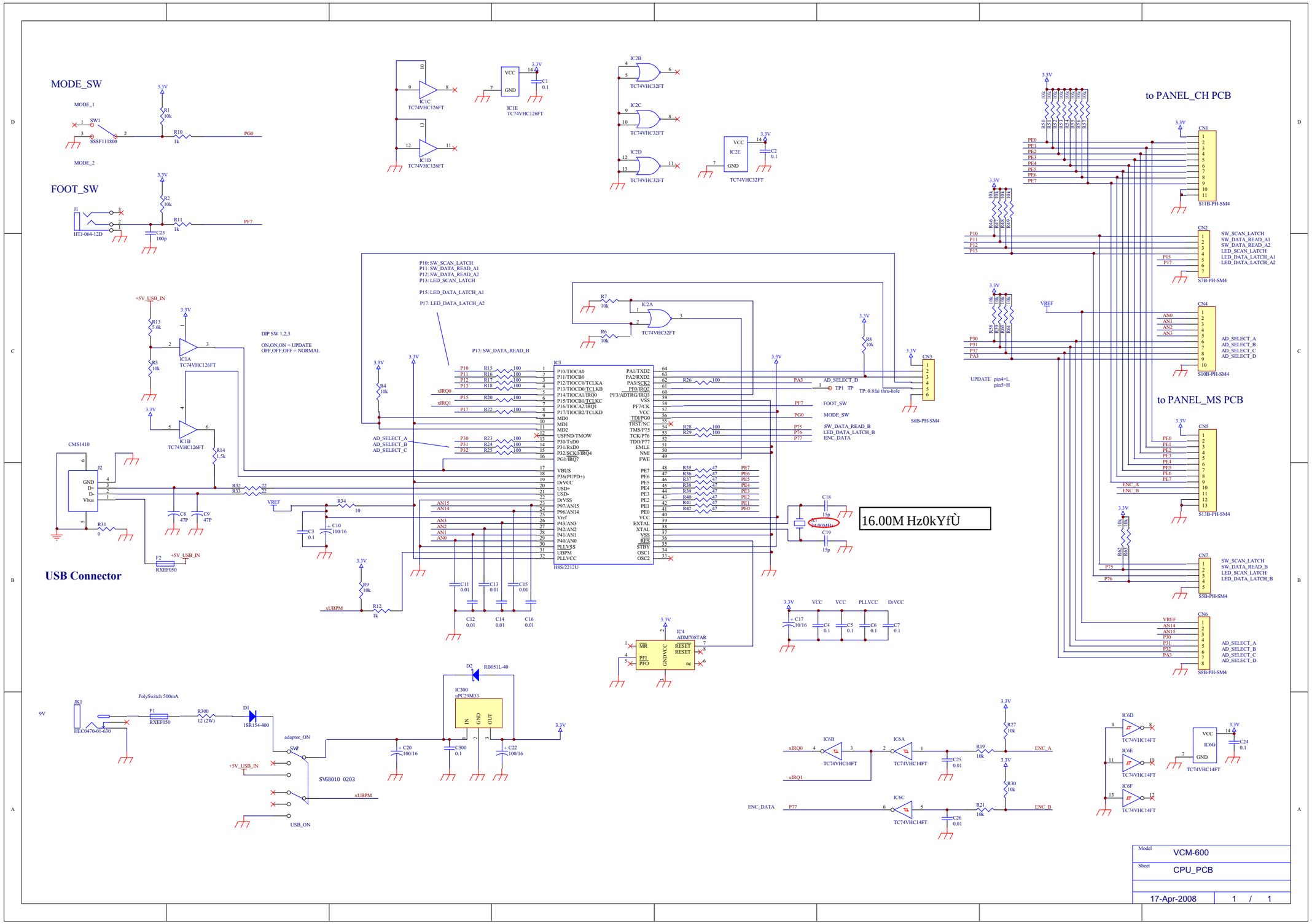
MS PANEL - *SW & LED*



MS PANEL - *VR*


CN6B
CON8
VREF
AN14
AN15
SEL_A
SEL_B
SEL_C
SEL_D
R208
10k
xSEL_D
Q210
DTC114YSA
C205
C206
C207
0.1
IC204
IC205
IC206
TC4051BP
COM
INH
VDD
VEE
VSS
AN14_00
AN14_01
AN14_02
AN14_03
AN14_04
AN14_05
AN14_06
AN14_07
AN14_08
AN14_09
AN14_10
AN14_11
AN14_12
AN15_00
AN15_01
AN15_02
AN15_03
AN15_04
AN15_05
AN15_06
VR200 10kB
EFFECT_A
VR201 10kB
EFFECT_E
VR202 10kB
RETURN_A_PAN
VR203 10kB
EFFECT_B
VR204 10kB
EFFECT_F
VR205 10kB
RETURN_B_PAN
VR206 10kB
EFFECT_C
VR207 10kB
EFFECT_G
VR208 10kB
MASTER_CUE
VR209 10kB
EFFECT_D
VR210 10kB
EFFECT_H
VR211 10kB
MASTER_PAN
VR212 10kB
TEMPO_FINE
VR213 10kB
RETURN_A_LEVEL
VR214 10kB
RETURN_B_LEVEL
VR216 10kB
MASTER_LEVEL
VR217 10kB
TEMPO
VR215 10kB
CROSS_FADER
CN205
CON4
CN206
VR218 10kB
CF_curve
VR219 10kB
IF_curve
Model
VCM-600
Sheet
PANEL_MS
15-May-2008
2 / 2

CPU


MODE_SW
FOOT_SW
USB Connector
to PANEL_CH PCB
to PANEL_MS PCB
16.00M Hz0kYfÙ
IC3
H8S/2212U
IC4
ADM708TAR
IC300
uPC29M33
CN1
CN2
CN3
CN4
CN5
CN6
CN7
S6B-PH-SM4
S10B-PH-SM4
S13B-PH-SM4
S8B-PH-SM4
Model
VCM-600
Sheet
CPU_PCB
17-Apr-2008
1 / 1

ELECTRICAL PART LIST

Location	Part Number	Description
PCB ASSY CHANNEL		
	PCB-2008H04+CH	PCB ASSY CHANNEL
PC BOARD		
PCB	1725-986A+0001	PCB CH/SPACER D/S FR-4
CAPACITOR		
C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C110, C111	150F-104K+K-II	CC 50V 0.1U 10% RLT 5x5
C112	157D-106M+K-GII	CE 16V 10UF 20% RLT 4X5
DIODE		
D100, D101, D102, D103, D104, D105, D106, D107, D108, D109, D110, D111, D112, D113, D114, D115, D116, D117, D118, D119, D120, D121, D122, D123, D124, D125, D126, D127, D128, D129, D130, D131, D132, D133, D134, D135, D136, D137, D138, D139, D140, D141, D142, D143, D144, D145, D146, D147, D148, D149, D150, D151, D152, D153, D154, D155, D156, D157, D158, D159	4840-0990+2	DIODE 1SS133(223163T)
TRANSISTOR		
Q100, Q101, Q102, Q103, Q104, Q105, Q106, Q107, Q108	4851-2960+K	TR PNP 2SA1296 HFE: 120
Q109, Q110, Q111, Q112, Q113, Q114, Q115, Q116, Q117, Q118, Q119	4860-1770+K	TR NPN DTC114YSA DIGITAL
RESISTOR		
R100, R101, R102, R103, R104, R105, R106, R107, R108	4705-102J+C	RCF 1/4W 1K 5% ATS
R109, R110, R111, R112, R113	4705-331J+C	RCF 1/4W 330R 5% ATS
R114, R115, R116, R117, R118, R119, R120, R121, R122, R123	4705-680J+C	RCF 1/4W 68R 5% ATS
R124, R125, R126, R127, R128, R129, R130, R131, R132	4705-103J+C	RCF 1/4W 10K 5% ATS
R133, R134, R135	4705-331J+C	RCF 1/4W 330R 5% ATS
SEMI FIXED		
VR100, VR101, VR102, VR103, VR104, VR105, VR106, VR107, VR108, VR109, VR110, VR111, VR112, VR113, VR114, VR115, VR116, VR117, VR118, VR119, VR120, VR121, VR122, VR123, VR124, VR125, VR126, VR127, VR128, VR129, VR130, VR131, VR132, VR133, VR134, VR135, VR136, VR137, VR138, VR139, VR140, VR141, VR142, VR143, VR144, VR145, VR146, VR147	4751-1719+0	VR ROTARY B10KX1 20% V
VR148, VR149, VR150, VR151, VR152, VR153	4751-1679+0	VR SLIDE B10KX1 20% V

Location	Part Number	Description
SWITCH		
SW100, SW101, SW102, SW103, SW104, SW105, SW106, SW107, SW108, SW109, SW110, SW111, SW112, SW113, SW114, SW115, SW116, SW117, SW118, SW119, SW120, SW121, SW122, SW123, SW124, SW125, SW126, SW127, SW128, SW129, SW130, SW131, SW132, SW133, SW134, SW135, SW136, SW137, SW138, SW139, SW140, SW141, SW142, SW143, SW144, SW145, SW146, SW147, SW148, SW149, SW150, SW151, SW152, SW153, SW154, SW155, SW156, SW157, SW158, SW159	5200-4847+0-01	SW TACT SPST SKQNAED010
LED		
LD100, LD101, LD102	3700-1643+Y	LED SC 3X5X24 YL HIGH
LD103	3700-1647+R	LED SC 2.8X4.6X27 RD
LD104, LD105, LD106, LD107	3700-1643+Y	LED SC 3X5X24 YL HIGH
LD108	3700-1647+R	LED SC 2.8X4.6X27 RD
LD109	3700-1641+G	LED SC 3X5.5X24 GN HIGH
LD110, LD111, LD112, LD113, LD114, LD115, LD116, LD117, LD118, LD119, LD120, LD121, LD122, LD123, LD124	3700-1643+Y	LED SC 3X5X24 YL HIGH
LD125, LD126, LD127, LD128, LD129	3700-1647+R	LED SC 2.8X4.6X27 RD
LD130, LD131, LD132, LD133, LD134, LD135, LD136, LD137, LD138, LD139, LD140, LD141, LD142, LD143, LD144, LD145, LD146, LD147, LD148, LD149	3700-1643+Y	LED SC 3X5X24 YL HIGH
LD150, LD151, LD152, LD153, LD154	3700-1647+R	LED SC 2.8X4.6X27 RD
LD155, LD156, LD157, LD158, LD159	3700-1641+G	LED SC 3X5.5X24 GN HIGH
LD160, LD161	3700-2856+W	LED SP 5X7.5X0.5 WH
LD162, LD163	3700-1649+Y	LED SC 3X5X24 YL SUPER
LD164, LD165	3700-1643+G	LED SC 3X5X24 GN HIGH
LD166, LD167, LD168, LD169	3700-1649+Y	LED SC 3X5X24 YL SUPER
LD170, LD171	3700-1643+G	LED SC 3X5X24 GN HIGH
LD172, LD173, LD174, LD175	3700-1649+Y	LED SC 3X5X24 YL SUPER
LD176, LD177	3700-1643+G	LED SC 3X5X24 GN HIGH
LD178, LD179	3700-1649+Y	LED SC 3X5X24 YL SUPER
LD180, LD181, LD182, LD183, LD184, LD185	3700-2856+W	LED SP 5X7.5X0.5 WH
IC		
IC100, IC101, IC102, IC103, IC104	3132-7200+0	IC ASIC TC74HC573AP
IC105, IC106, IC107, IC108, IC109, IC110, IC111	3132-7220+0	IC ASIC TC4051BP DIP16
MISCELLANEOUS		
CN1B	7013-0860+0	WIRE-CONN 11P P2.0 #26
CN2B	7012-8091+0	WIRE-CONN 7P P2.0 #26
CN4B	7013-0870+0	WIRE-CONN 10P P2.0 #26
FOR LD162, FOR LD163, FORLD164, FOR LD165, FOR LD166, FOR LD167, FOR LD168, FOR LD169, FOR LD170, FOR LD171, FOR LD172, FOR LD173, FOR LD174, FOR LD175, FOR LD176, FOR LD177, FOR LD178, FOR LD179	4152-5271+0	LED SPACER 10MM HIGH

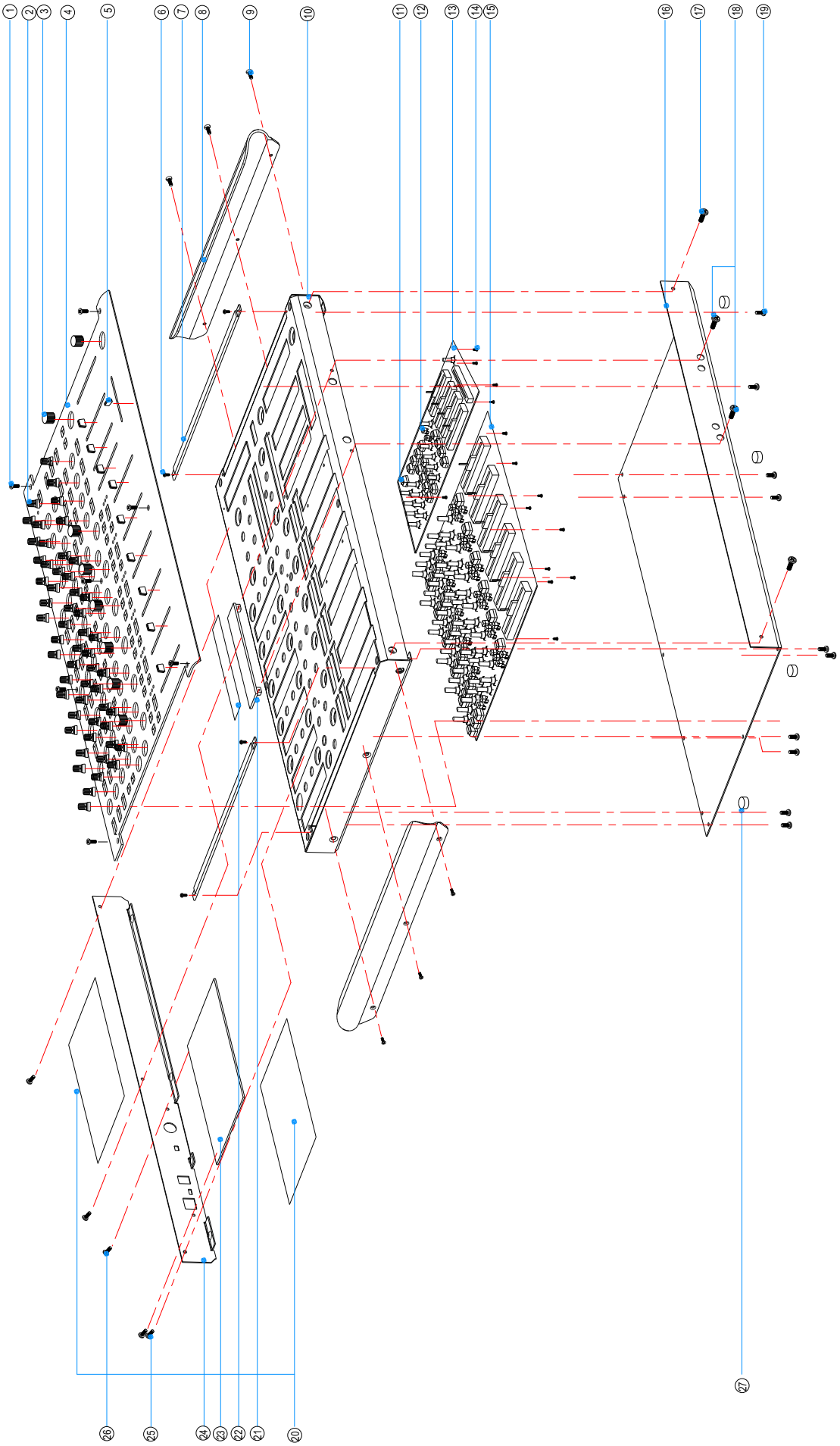
Location	Part Number	Description
PCB ASSY CURVE		
	PCB-2008H04+CUV	PCB ASSY CURVE
PC BOARD		
SECTION B	1725-987A+0001	PCB MAS/CURVE/SPACER D/S D
WAFER/SOCKET		
CN206	2102-040R+J01	WAFER 4P P2.0 90DEG
SEMI FIXED		
VR218, VR219	4751-1689+0	VR ROTARY B10KX1 20% H
MISCELLANEOUS		
T1, T2	4132-6221+0	BRACKET, GROUNDING
PCB ASSY MASTER		
	PCB-2008H04+MAS	PCB ASSY MASTER
PC BOARD		
SECTION A	1725-987A+0001	PCB MAS/CURVE/SPACER D/S D
CAPACITOR		
C200	157D-106M+K-GII	CE 16V 10UF 20% RLT 4X5
C201, C202, C203, C204, C205, C206, C207	150F-104K+K-II	CC 50V 0.1U 10% RLT 5x5
DIODE		
D200, D201, D202, D203, D204, D205, D206, D207, D208, D209, D210, D211, D212, D213, D214, D215, D216, D217, D218	4840-0990+2	DIODE 1SS133(223163T)
TRANSISTOR		
Q200, Q201, Q202, Q203, Q204	4851-2960+K	TR PNP 2SA1296 HFE: 120
Q205, Q206, Q207, Q208, Q209, Q210	4860-1770+K	TR NPN DTC114YSA DIGITAL
RESISTOR		
R200, R201, R202, R203, R204, R205, R206, R207, R208	4705-103J+C	RCF 1/4W 10K 5% ATS
R209, R210, R211, R212, R213	4705-102J+C	RCF 1/4W 1K 5% ATS
R214, R215, R216, R217, R218	4705-331J+C	RCF 1/4W 330R 5% ATS
R219, R220	4705-561J+C	RCF 1/4W 560R 5% ATS
R221, R222, R223, R224, R225	4705-680J+C	RCF 1/4W 68R 5% ATS
R226, R227, R228	4705-331J+C	RCF 1/4W 330R 5% ATS
SEMI FIXED		
VR200, VR201, VR202, VR203, VR204, VR205, VR206, VR207, VR208, VR209, VR210, VR211, VR212	4751-1719+0	VR ROTARY B10KX1 20% V
VR213, VR214	4751-1679+0	VR SLIDE B10KX1 20% V

Location	Part Number	Description
VR215	4751-1559+0	VR SLIDE B10KX1 20% V
VR216, VR217	4751-1679+0	VR SLIDE B10KX1 20% V
SWITCH		
SW200, SW201, SW202, SW203, SW204, SW205, SW206, SW207, SW208, SW209, SW210, SW211, SW212, SW213, SW214, SW215, SW216, SW217	5200-4847+0-01	SW TACT SPST SKQNAED010
LED		
LD200	3700-1643+R	LED SC 3X5X24 RD HIGH
LD201, LD202, LD203, LD204, LD205, LD206	3700-1641+G	LED SC 3X5.5X24 GN HIGH
LD207, LD208	3700-1647+R	LED SC 2.8X4.6X27 RD
LD209	3700-1643+Y	LED SC 3X5X24 YL HIGH
LD210	3700-1647+R	LED SC 2.8X4.6X27 RD
LD211, LD212, LD213, LD214	3700-1643+Y	LED SC 3X5X24 YL HIGH
LD215, LD216, LD217, LD218, LD219	3700-2856+W	LED SP 5X7.5X0.5 WH
LD220	3700-1643+R	LED SC 3X5X24 RD HIGH
LD221, LD222	3700-1641+G	LED SC 3X5.5X24 GN HIGH
LD223	3700-1643+Y	LED SC 3X5X24 YL HIGH
LD224	3700-1641+G	LED SC 3X5.5X24 GN HIGH
LD225, LD226, LD227	3700-2856+W	LED SP 5X7.5X0.5 WH
IC		
IC200, IC201, IC202, IC203	3132-7200+0	IC ASIC TC74HC573AP
IC204, IC205, IC206	3132-7220+0	IC ASIC TC4051BP DIP16
MISCELLANEOUS		
CN205	7013-0840+0	WIRE-CONN 4P P2.0 #28
CN5B	7013-0850+0	WIRE-CONN 13P P2.0 #26
CN6B	7012-8081+0	WIRE-CONN 8P P2.0 #26
CN7B	7012-8121+0	WIRE-CONN 5P P2.0 #26
EN200	5200-4980+0-01	ENCODER ROTARY DPDT
FOR LD200, FOR LD220	4171-0011+0	LED SPACER H=11.0mm
PCB ASSY MCU		
	PCB-2008H04+MCU	PCB ASSY MCU
PC BOARD		
PCB	1725-983A+0000	PCB MCU D/S FR-4 A
CAPACITOR		
C1	150E-104Z+P-AC	CC 25V 0.1UF +80/-20%
C10	157D-107M+3-MJ	CE 16V 100uF 20% SM
C11, C12, C13, C14, C15, C16	150F-103M+P-AC	CC 50V 0.01U 20%
C17	157D-106M+3-GJ	CE 16V 10U 20% SMD 4X5.4
C18, C19	150F-150J+P-AC	CC 50V 15P 5% 0603
C2	150E-104Z+P-AC	CC 25V 0.1UF +80/-20%
C20, C22	157D-107M+3-MJ	CE 16V 100uF 20% SM

Location	Part Number	Description
C23	150F-101J+P-AC	CC 50V 100P 5% 0603/1608
C24	150E-104Z+P-AC	CC 25V 0.1UF +80/-20%
C25, C26	150F-103M+P-AC	CC 50V 0.01U 20%
C3, C300, C4, C5, C6, C7	150E-104Z+P-AC	CC 25V 0.1UF +80/-20%
C8, C9	150F-470J+P-AC	CC 50V 47P 5% 0603 1x2
DIODE		
D1	4840-1150+0	SMD DIODE 1SR154-400TE25
D2	4800-51L0+6	DIODE SCHOTTKY 40V 3A
JACK/SOCKET		
J1	2113-1955+0	PHONE JACK ST 6.35MM
J2	2113-3212+0	JACK USB 4P 90DEG
JK1	2113-1136+0	DC JACK HEC0470-01-630
CRYSTAL		
X1	2300-2280+0	CRYSTAL 16MHZ SMD
RESISTOR		
R1	4723-103J+P-R	RMG 1/16W 10K 5% 0603
R10, R11, R12	4723-102J+P-R	RMG 1/16W 1K 5% 0603
R13	4723-562J+P-R	RMG 1/16W 5.6K 5% 0603
R14	4723-152J+P-R	RMG 1/16W 1.5K 5% 0603
R15, R16, R17, R18	4723-101J+P-R	RMG 1/16W 100R 5% 0603
R19	4723-103J+P-R	RMG 1/16W 10K 5% 0603
R2	4723-103J+P-R	RMG 1/16W 10K 5% 0603
R20	4723-101J+P-R	RMG 1/16W 100R 5% 0603
R21	4723-103J+P-R	RMG 1/16W 10K 5% 0603
R22, R23, R24, R25, R26	4723-101J+P-R	RMG 1/16W 100R 5% 0603
R27	4723-103J+P-R	RMG 1/16W 10K 5% 0603
R28, R29	4723-101J+P-R	RMG 1/16W 100R 5% 0603
R3, R30	4723-103J+P-R	RMG 1/16W 10K 5% 0603
R300	4719-120J+1-X	RMF 2W 12R 5% AL
R31	4723-000J+P-R	RMG 1/16W 0R 5% 0603
R32, R33	4723-220J+P-R	RMG 1/16W 22R 5% 0603
R34	4723-100J+P-R	RMG 1/16W 10R 5% 0603
R35, R36, R37, R38, R39, R40, R41, R42	4723-470J+P-R	RMG 1/16W 47R 5% 0603
R4, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R6, R60, R61, R62, R63, R7, R8, R9	4723-103J+P-R	RMG 1/16W 10K 5% 0603
IC		
IC1	3132-7160+0	IC ASIC TC74VHC126FT
IC2	3132-7190+0	IC ASIC TC74VHC32FT
IC3	3132-7101+0-28	IC MCU H8S/2212U FP-64E
IC300	3132-0160+0	IC UPC29M33T-E1-AZ REG
IC4	3132-7060+0-01	IC REGULATOR ADM708TARZ
IC6	3132-7180+0	IC ASIC TC74VHC14FT
SWITCH		

Location	Part Number	Description
SW1	5200-4982+0	SWITCH SLIDE SPDT L=6
SW2	5200-4974+0-10	SWITCH SLIDE 3P2T 12X7 S
MISCELLANEOUS		
CN1	2101-3249+0	WAFER 11P P2.0 RA SMD M
CN2	2101-3014+0	WAFER 7PIN P2.0 RA
CN3	2101-3243+0	WAFER 6P P2.0 RA SMD M
CN4	2101-3248+0	WAFER 10P P2.0 RA SMD M
CN5	2101-3238+0	WAFER 13P P2.0 RA SMD M
CN6	2101-3241+0	WAFER 8P P2.0 RA SMD M
CN7	2101-3247+0	WAFER 5P P2.0 RA SMD M
LABEL	3000-9812+0	BLANK LABEL (5X10)
software	312A-0430+00	SOFTWARE MCU CONTROLLER
T1, T2	4132-6221+0	BRACKET, GROUNDING

EXPLODED VIEW • PARTS LIST



ITEM	PART NUMBER	DESCRIPTION	Q'TY
1	2901-3006+3000	SCREW MACHINE FLAT-CS	7
2	2446-6726+0	KNOB-ROTARY D-SHAFT 180D	54
3	2447-8901+0	KNOB-ROTARY D15.5X15 ABS BLK	8
4	1407-1901+0	PANEL-TOP AL SILVER	1
5	2444-5201+2	KNOB-FADER INKFILL WHITE	11
6	2900-2606+0000	PH M2.6X6	4
7	3717-7206+0	LENS 348X10X4 PMMA	2
8	1407-2201+0	PANEL-SIDE AL SILVER	2
9	2901-3008+3000	M3X8 C'SINK (BLK)	6
10	1407-2101+0	COVER-BOTTOM SECC BLK	1
11	2447-7801+0	BUTTON-ILLUMINATE 2 POLE	40
12	2447-7601+0	BUTTON-TOP PANEL 8X8X11	38
13		PCB-2008H04+COB	1
14	2904-3006+3000	SCREW M3X6 BINDING (BLK)	14
15		PCB-2008H04+CH	1
16	1407-2101+0	COVER-BOTTOM SECC BLK	1
17	2904-3006+3000	SCREW M3X6 BINDING (BLK)	2
18	2904-3006+3000	SCREW M3X6 BINDING (BLK)	2
19	2904-3006+3000	SCREW M3X6 BINDING (BLK)	12
20	3100-7821+0	FIBRE-ISOLATION	2
21		PCB-2008H04+CUV	1
22		PCB-2008H04+MCU	1
23	3100-7831+0	FIBRE-ISOLATION	1
24	1470-2301+0	PANEL-REAR SECC BLK	1
25	2904-3006+3000	SCREW M3X6 BINDING (BLK)	4
26	3100-7821+0	FIBRE-ISOLATION	2
27	4157-1681+0	RUBBER FOOT D14.5X3	4

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Issue 1
Feb.25, 09