

SERVICE MANUAL

S Y S T E M 8 X 8 A U D I O

MATRIX

PX/RM/LM-8000

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SPECIFICATIONS

0dB = 1Vrms

		PX-8000	RM-8000	LM-8000
Audio Output		0dB(Balanced)		
Audio Input	Paging & RM/MIC & LM/MIC	- 50dB(Balanced)		
	BGM(Main & Local)	- 10dB(Balanced)		
Tone Control (100Hz ~ 10kHz)	Paging MIC	± 10dB		
	Audio Output	± 12dB		
Frequency Response	BGM (60Hz ~ 15kHz)	± 3dB		
	MIC (100Hz ~ 10kHz)	± 3dB		
S/N	BGM	Better than 75dB		
	MIC	Better than 65dB		
T.H.D.	BGM	Less than 0.05%		
	MIC	Less than 0.05%		
Priority Control		Paging MIC > DRP > RM1 > RM2> RM3> RM4 > LM-8000 > Main BGM		
Phantom Power		DC 24V		
Serial Interface (RS-422)	Communication Speed	9600bps		
	Communication Distance	Maximum 300m (UTP CAT5)		
Operation Temperature		- 10°C ~ + 40°C		
Power Source		100~120VAC or 220~240VAC; 50/60Hz (Supplied AC mains transformer depends on country requirements)		
Power Consumption		60W	-	-
Weight (SET)		7.5kg/16lb	1.5kg/3.2lb	130g/0.28lb
Dimensions (SET)		482(W)x132(H)x380(D)mm 19(W)x5.2(H)x1.5(D)in	200(W)x70(H)x206(D)mm 7.9(W)x2.8(H)x8.1(D)in	70(W)x114(H)x52(D)mm 2.8(W)x4.5(H)x2.0(D)in

* Specifications and design are subject to change without notice.

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ELECTRICAL PARTS LIST (PX-8000)

Ref.	Part No.	Description	Value
MAIN B'D 4000001900			
Q1 Q10	2008606998-T	TR,SG,NPN,300mA,20V,KTD1302,TO-92,TA	KTD1302
Z1	2058500973	DIODE,ZN,500mW,BM,4.7V,DO-35,TA	4.7BM
IC140	2118080436	IC,POW AMP,SW/Bohm,LM384N,DIP14	LM384
IC95 IC107	2128220000	IC,UND 2981 ALLEGRO	M9D2981
IC85	2138040000	IC,EPPROM,M93C46-WBN6P,DIP8	M93C46-WBN
L4	2698010000	COIL,FER,TOROID,500UH	500uH
R2-3 R26 R73	3039100575-T	RES,MF,10,2W,5%,RA R,TA	10 2W
R75-80			
R25	3039101575-T	RES,MF,100,2W,5%,RA R,TA	100 2W
R28-29 R467	3096103991	RES,ARY,10K,1/5W,5%,PULL,BU,SIP9	10K
R477			
VR50-57	3228067300	VR,ROT,HOR,1U,120,20K,A	20KA
C48	3408222271	CAP,E,SM,SG,85C,2200uF,50V,M,18P	2200/50
C837	3408247169	CAP,E,SM,SG,85C,470uF,35V,M,10x20	470/35
C24 C26 C28	3409210071-T	CAP,E,SM,SG,85C,10uF,50V,M,SP,TA	10/50
C30-32 C34 C36			
C38 C40 C93-94			
C478 C502 C603			
C606 C614 C647			
C650 C657 C665			
C668 C675 C683			
C686 C693 C701			
C704 C711 C719			
C722 C729 C737			
C740 C747 C755			
C758 C765 C860			
C1-10 C608	3409222071-T	CAP,E,SM,SG,85C,22uF,50V,M,SP,TA	22/50
C616-617 C620			
C652 C659-660			
C663 C670			
C677-678 C681			
C688 C695-696			
C699 C706			
C713-714 C717			
C724 C731-732			
C735 C742			
C749-750 C753			
C760 C767-768			
C771 C797 C799			
C801 C803 C805			
C807 C809 C811			
C835 C840-842			
C863			
C43-45 C58 C61	3409222141-T	CAP,E,SM,SG,85C,220uF,25V,J,8P,TA	220/25
C65			
C55	3409222171-T	CAP,E,SM,SG,85C,220uF,50V,M,10P,TA	220/50
C95 C289 C865	3409247071-T	CAP,E,SM,SG,85C,47uF,50V,M,6P,TA	47/50
C23 C25 C27	3409247971-T	CAP,E,SM,SG,85C,4.7uF,50V,M,SP,TA	4.7/50
C29 C33 C35			
C37 C39 C92			
C867			
C11-13 C15-16	3409247973-T	CAP,E,SM,SE,85C,4.7uF,50V,M,TA	4.7/50
C21 C41-42			
C838	3609104122-T	CAP,FILM,POLYESTR,SM,0.1uF,100V,J,TA	0.1/100(M)
C97	3609563120-T	CAP,FILM,POLYESTR,0.056uF,100V,J,TA	0.056/100(M)
X2	3938000964	X-TAL,B,000MHZ,30ppm,HC-49/S	8MHz
CN3	4350026500	CON ASSY,FL,12P,5264,BH0640,80MM	ASSY-12P
TER9	4408193009	TERMINAL,BLOCK(M),9P,3.81MM,AN	TERMINAL09P
JK9	4428592510	CON WAFER,BOX(M),10P,2/ST	TPH1419-10P
CN15	4428592520	CON WAFER,BOX(M),20P,2/ST	TPH1419-20P
CN2	4428592526	CON WAFER,BOX(M),26P,2/ST	TPH1419-26P
CN7	4428592530	CON WAFER,BOX(M),30P,2/ST	TPH1419-30P
CN5 CN1+6	4428592540	CON WAFER,BOX(M),40P,2/ST	TPH1419-40P
AN109	4428595002	CON WAFER,BOX(M),2P,ST	LWS267-02P
CN4	4428595009	CON WAFER,BOX(M),9P,ST	LWS267-09P
CN13	4428595010	CON WAFER,BOX(M),10P,ST	LWS267-10P
JK1-8	4438095310	JACK,RCA,2U,2P,2/AN	RCA02P
JK102	4438191900	JACK,DSUB(M),1U,25P,2/AN	D-SUB25P
JK101	4438191910	JACK,DSUB(F),1U,25P,ST	D-SUB25P(F)
SW111	4628981610	SW,SLIDE,HOR,DPTD,5,L6	JSS-2208A
RLY1-2	5528099410	RELAY,DPTD,5V,1A,125VAC,ATQ209 5V	5V
Q2-9	520560240001	TR,SG,NPN,150mA,50V,2SC4081Y,SC-70,TA	2SC4081
IC98 IC125-132	52110001000	IC,MUX,8,1,DG408DYZ,SOIC16	DG408DYZ

Ref.	Part No.	Description	Value
IC138			
IC20	52110001100	IC,REC/PLAY,APR9600,SOP28	APR 9600
IC23-24	52110001200	IC,OP AMP,QUAD,LM324MT,SSOP 14P	LM324
IC1-4 IC10-19	521101080002	IC,OP AMP,NJM2068M,SOP8	NJM2068M
IC21-22 IC66			
IC133-136			
IC139			
IC160	52120001000	IC,MCU,ATMEL,AT89S52,TQFP44	AT89S52
IC86	52122524001	IC,DEMUX,74HC154,SOP24	74HC154D
IC7-9	521250107701	IC,AND GATE,74HC08,SOP14	74HC08
IC148	521250704801	IC,NAND GATE,74HC00,SOP14	74HC00
IC97	521281169601	IC,ADC,AD7819YR,SOP16	AD7819YR
IC89 IC96	52130003400	IC,TRANSCIEVER,74HCT245,SSOP20P	74HCT245
IC149-150			
IC203-204	52150000400	IC,SW,QUAD SPST,ADG1311,SSOP16P	ADG1311
IC25-26	52150000500	IC,SW,QUAD SPST,ADG1312,SSOP16P	ADG1312
IC201-202			
IC5-6 IC29	52150000600	IC,D-FF,74HCT574,SSOP20P	74HCT574
IC92-94 IC104			
IC137 IC146			
IC151-159	52150000700	IC,SHIFT REGISTER,74HC595D,SOIC16	74HC595D
IC87	52150000900	IC,RESET,DS1232LP,u-SOP	DS1232LP
IC144	52170000200	IC,MELODY,CHIME3EM,HT86144,SOP28	HT86144
D21 D49	522100500001	DIODE,SW,200mA,100V,MM804148,SOT-23,TA	1N4148
D1-20 D22-35	522400505001	DIODE,SW,0.1A,85V,KDS226,SOT-23,TA	KDS226
L2-3	526103312990	COIL,FER,RADIAL,330uH,TA	330uH
R169 R171	530100007121	RES,TF,0,1/16W,0.05,1608	0
R1 R4-24	530101007121	RES,TF,10,1/16W,5%,1608	10
R30-72 R74			
R104-109			
R318-319			
R469-476			
R511-516			
R541 R552 R558	530101017121	RES,TF,100,1/16W,5%,1608	100
R592 R598 R604			
R610 R616 R622			
R628 R634 R640			
R646 R652 R658			
R664 R670 R725			
R81-R2 R92	530101027121	RES,TF,1K,1/16W,5%,1608	1K
R146 R155-168			
R547 R550 R563			
R566-567			
R570-571			
R574-575			
R578-579			
R582-583			
R586-587 R590			
R723 R728-729			
R27 R100-103	530101037121	RES,TF,10K,1/16W,5%,1608	10K
R115 R117 R119			
R121 R124-127			
R131 R133 R135			
R137 R170 R557			
R560 R597 R600			
R609 R612 R621			
R624 R633 R636			
R645 R648 R657			
R660 R669 R672			
R675 R677 R679			
R681 R683 R685			
R687 R689			
R694-695			
R88 R551 R591	530101047121	RES,TF,100K,1/16W,5%,1608	100K
R603 R615 R627			
R639 R651 R663			
R724 R726			
R730-731			
R559 R599 R611	530101237121	RES,TF,12K,1/16W,5%,1608	12K
R623 R635 R647			
R659 R671			
R116 R118 R120	530101847121	RES,TF,180K,1/16W,5%,1608	180K
R122 R132 R134			
R136 R138			
R553-554	530102037121	RES,TF,20K,1/16W,5%,1608	20K

Ref.	Part No.	Description	Value
R593-594			
R605-606			
R617-618			
R629-630			
R641-642			
R653-654			
R665-666 R719			
R676 R678 R680	530102237231	RES,TF,22K,1/10W,5%,2012	22K
R682 R684 R686			
R688 R690			
R720	530102247121	RES,TF,220K,1/16W,5%,1608	220K
R869	530102437121	RES,TF,24K,1/16W,5%,1608	24K
R721	530103037121	RES,TF,30K,1/16W,5%,1608	30K
R99 R112-114	530103347121	RES,TF,330K,1/16W,5%,1608	330K
R123 R128-130			
R691	530103927121	RES,TF,3.9K,1/16W,5%,1608	3.9K
R83-85 R87	530104717121	RES,TF,470,1/16W,5%,1608	470
R94-97 R561			
R601 R613 R623			
R637 R649 R661			
R673			
R89-91 R93	530104727121	RES,TF,4.7K,1/16W,5%,1608	4.7K
R692			
R86 R228	530104737121	RES,TF,47K,1/16W,5%,1608	47K
R548-549			
R564-565			
R568-569			
R572-573			
R576-577			
R580-581			
R584-585			
R588-589			
R556 R596 R608	530105127121	RES,TF,5.1K,1/16W,5%,1608	5.1K
R620 R632 R644			
R656 R668			
R110	530105617121	RES,TF,560,1/16W,5%,1608	560
R555 R595 R607	530105627121	RES,TF,5.6K,1/16W,5%,1608	5.6K
R619 R631 R643			
R655 R667			
R98 R111	530105637121	RES,TF,56K,1/16W,5%,1608	56K
R147-154	530106827121	RES,TF,6.8K,1/16W,5%,1608	6.8K
R727	530108217121	RES,TF,820,1/16W,5%,1608	820
R693	53082708150	RES,TF,2.7,1/16W,5%,1608	2.7
S35101024321	CAP,CE,MONO,X7R,1000pF,50V,J,1608,TA		0.001U
C14 C17-20	535101045321	CAP,CE,MONO,X7R,0.1uF,50V,Z,1608,TA	0.1U
C48-49 C59-60			
C64 C66 C69-70			
C72-74 C77			
C85-86 C91			
C105 C126-134			
C234 C296			
C475-477 C479			
C488 C497 C499			
C501 C503 C609			
C624 C627 C630			
C633 C636 C639			
C642-646			
C773-788			
C829-830 C839			
C861 C864 C866			
C868			
C604 C619 C648	535601012430	CAP,CE,MONO,COG,100PF,50V,J,1608,TA	100P
C662 C666 C680			
C684 C698 C702			
C716 C720 C734			
C738 C752 C756			
C770 C832 C862			
C46-47	535602202430	CAP,CE,MONO,COG,22PF,50V,J,1608,TA	22P

Ref.	Part No.	Description	Value
C22 C96 C607	535604702430	CAP,CE,MONO,COG,47PF,50V,J,1608,TA	47P
C615 C651 C658			
C669 C676 C687			
C694 C705 C712			
C723 C730 C741			
C748 C759 C766			
C798 C800 C802			
C804 C806 C808			
C810 C812			
X1	539300003000	X-TAL,11.0592MHZ,30PPM,20PF,HC49/S	11.0592MHz
D36-48	554100501520	SURGE PROTECTION,50W,1SKV,PGOSFBESC,KEC	PGOSFBESC
DSUB B'D 4000001910			
AN9	4428592526	CON WAFER,BOX(M),26P,2/ST	TPH1419-26P
JK10	4438191910	JACK,DSUB(F),1U,25P,ST	D-SUB25P
LED B'D 4000001920			
LD2 LD4-6 LD8	23000017010	LED,RND,3.1MM,BLU,CLR,1U,ST2.5	LT1L1CHTBK1
LD10 LD12 LD14			
AN4	4350026600	CON ASSY,DS,9P,5264,35022,200MM	ASSY-02P
R139-145 R815	530101527121	RES,TF,1.5K,1/16W,5%,1608	1.5K
O UTPUTB'D 4000007700			
Q1-10	2008606998-T	TR,SG,NPN,300mA,20V,KTD1302,TO-92,TA	KTD1302
R95-100 R738	3039100575-T	RES,MF,10,2W,5%,RA R,TA	10 2W
R870			
R510	3039470575-T	RES,MF,47,2W,5%,RA R,TA	47 2W
VR1-16	3228067310	VR,ROT,HOR,1U,120,100K,B	100KB CC
C123-124	3409210071-T	CAP,E,SM,SG,85C,10uF,50V,M,SP,TA	10/50
C146-147			
C160-161 C176			
C223 C304 C319			
C341-342			
C368-369			
C381-382			
C394-395			
C303 C305-306	3409210971-T	CAP,E,SM,SG,85C,1uF,50V,M,SP,TA	1/50
C308-309 C318			
C320-321			
C323-324			
C11-12 C50	3409222071-T	CAP,E,SM,SG,85C,22uF,50V,M,SP,TA	22/50
C87-90 C112			
C121 C137 C142			
C144 C150 C156			
C158 C164 C169			
C171 C244 C248			

ELECTRICAL PARTS LIST (RM-8000)

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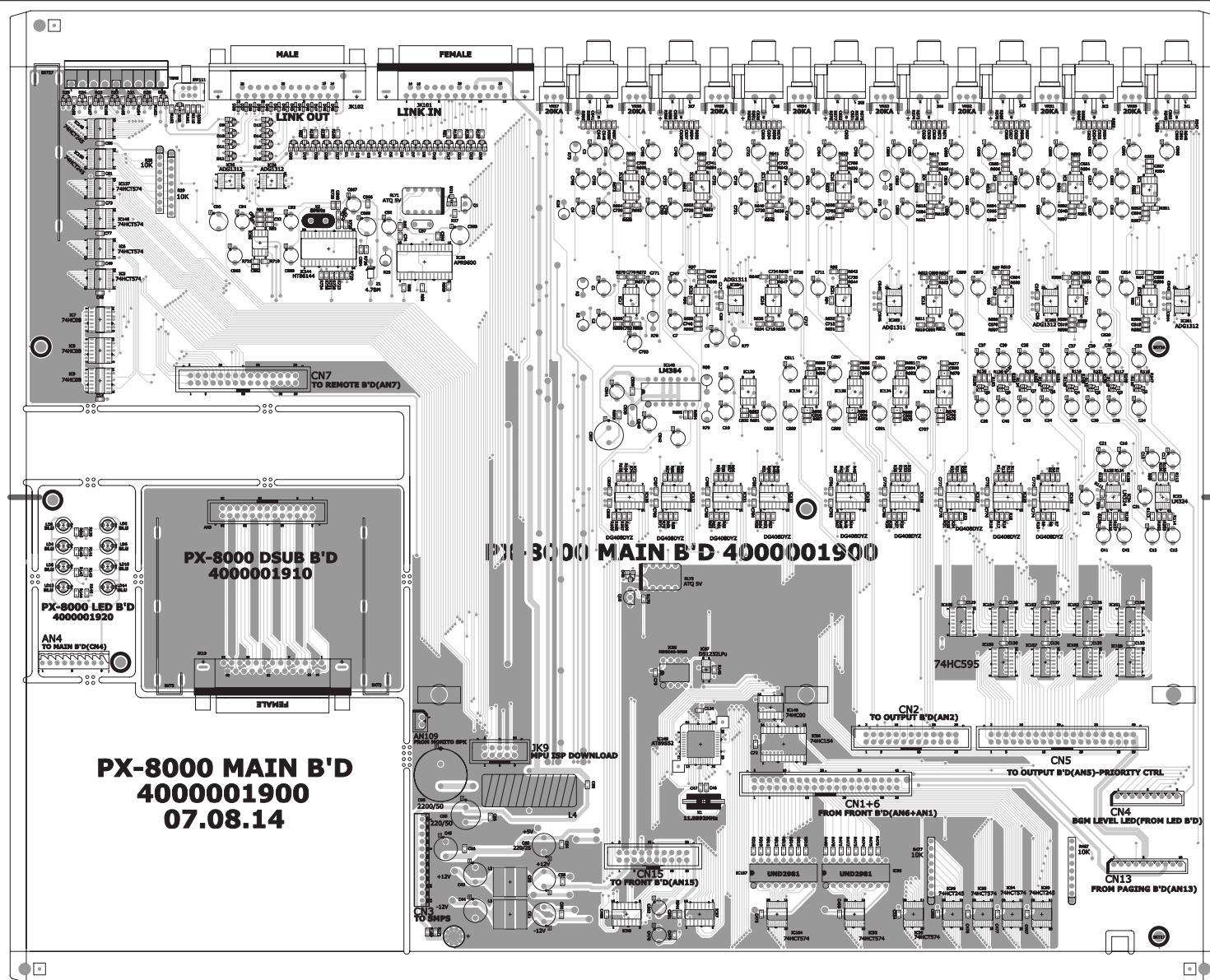
Ref.	Part No.	Description	Value
MAIN B'D 400007500			
Q1	2008060998-B	TR,SG,NPN,300mA,20V,KTD1302,TO-92,TA	KTD1302
D3	2058100964	DIODE,RE,1A,40V,1N5819,DO-41,TA	1N5819
D5	2058100996	DIODE,RE,1A,400V,1N4006,DO-41,TA	1N4006(4007)
Z3	2058050205	DIODE,ZN,500mW,BM,5.6V,DO-35,TA	5.6BM
Z2	2058052180	DIODE,ZN,500mW,BM,1.8V,DO-35,TA	1.8BM
IC6	2118080346	IC,POW AMP,5W/8ohm,LM384N,DIP14	LM384
IC20	2123200991	IC,CMCU,AT89C2051-2,4PI,DIP20	89C2051
IC14	2128220600	IC,RESET,DS1232,DIP8	DS1232
IC5	2128840240	IC,DIVIDER,LED,LN4006,14,DIP18	LN4006
U9	2168440978	IC,SW REG,5V,1A,U25752,5,T05D	U2575
P83	3029100475-T	RES,AF,10,1/10W,5%,RA R	10 1W
R7	3039220472-T	RES,AF,22,1/10W,5%,RA R,TA	22 1W
R41	3096103991	RES,ARY,10K,1/5W,5%,PUL,BUI,SIP9	10K
VR1-2	3228067300	VR,ROT,HOR,1U,U20,20K,TA	20KA
C45	3408233141	CAP,E,SM,5G,85C,330uF,25V,M,10P	330/25
C42 C61 C62	3408247171	CAP,E,SM,5G,85C,470uF,50V,M,13P	470/50
C13 C22 C35 C39	3409210071-T	CAP,E,SM,5G,85C,10uF,50V,M,5P,TA	10/50
C51-S2 C6-8 C10 C17 C25 C26 C28-31 C34 C36 C38	3409210171-T	CAP,E,SM,5G,85C,100uF,50V,M,8P,TA	100/50
C18 C19 C27	3409222071-T	CAP,E,SM,5G,85C,22uF,50V,M,5P,TA	22/50
C19 C37 C40	3409247071-T	CAP,E,SM,5G,85C,47uF,50V,M,6P,TA	47/50
C21 C63	3409247971-T	CAP,E,SM,5G,85C,4.7uF,50V,M,5P,TA	4.7/50
C2-3	3409710070-T	CAP,E,NP,NR,85C,10uF,50V,M,5,11,TA	10/50 NP
X2	36930104122-T	IC,POLY,PESTYR,SM,0.1uF,100V,1,TA	0.1/100(M) 8MHz
K3	3938000964	X,TL,8.0,0.00MHZ,30ppm,H,4C-9/5	MODULAR08P
CN2	4418521867	CON WAFER,BXJIM,7P,25mm,ST	FE-8T-26P
CN1	4248533202	CON WAFER,LOCK(M),2P,AN	3P51-02C
CN3	4428595005	CON WAFER,BXJIM),5P,ST	LW5267-05P
F1-2	4588999110	SW DIP CUP 5-20	CUP 20mm
SW15	4698099210	SUP DIP U2-032A	SW DIP U2-032A
IC1 IC3-4 IC21	S2110108002	IC,OP AMP,NJM2068M,SO8	NJM2068M
IC10 IC15	S2125160770	IC,DEMUX,74HC138A,SOIC16	74HC138D
IC9	S2127508760	IC,TRANSCIEVER,SN75176B,SOIC8	SN75176BD
D12	S2130003400	IC,TRANSCIEVER,74HC1245,TS5020P	74HC1245
IC2	S2170000200	IC,MELODY,CHIME8EM,HT86144,SO28	HT86144
D1-2	S2210050001	DIODE,SW,200mA,10V,MMSD4168,SOT-23,TA	1N4148
L1-3	S26103312990	COIL,FER,RADIAL,330uH,TA	330uH
R84-R85	S3010004280	RES,TF,0.1/10W,5%,J2012	0
R9 R23 R94-95	S30101017231	RES,TF,100,1/10W,5%,2012	100
R20 R39 R77 R87	S30101027231	RES,TF,1K,1/10W,5%,2012	1K
R8 R19 R27 R33 R36 R45 R86	S30101037231	RES,TF,10K,1/10W,5%,2012	10K
R92-93 R11-12 R16-17 R21-22 R28 R30-31 R34-35 R41-42 R46 R88-89	S30101047231	RES,TF,100K,1/10W,5%,2012	100K
R10	S30101137231	RES,TF,11K,1/10W,5%,2012	11K
R80-R81	S30101217231	RES,TF,120,1/10W,5%,2012	120
R43	S30101227231	RES,TF,1.2K,1/10W,5%,2012	1.2K
R6	S30101237231	RES,TF,12K,1/10W,5%,2012	12K
R13 R59	S30101837231	RES,TF,18K,1/10W,5%,2012	18K
R60	S30102037231	RES,TF,20K,1/10W,5%,2012	20K
R25	S30102247231	RES,TF,220K,1/10W,5%,2012	220K
R32	S30102437231	RES,TF,24K,1/10W,5%,2012	24K

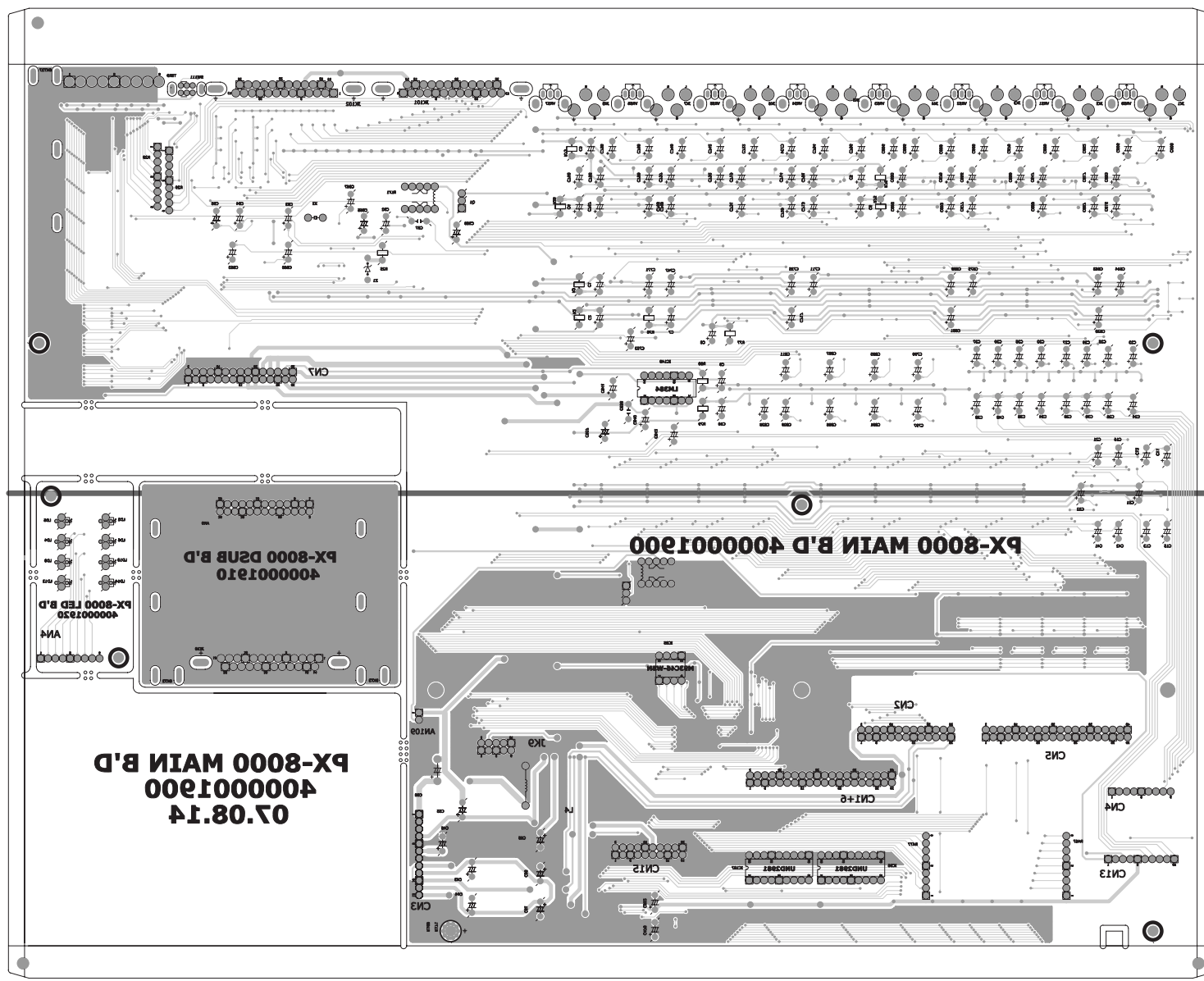
Ref.	Part No.	Description	Value
R61	S30102797231	RES,TF,2.7,1/10W,5%,2012	2.7
R24	S30103637230	RES,TF,36k,1/10W,5%,2012	36k
R44	S30103927231	RES,TF,3.9k,1/10W,5%,2012	3.9K
R40	S30103937231	RES,TF,3.9k,1/10W,5%,2012	39K
R4-5	S30104717231	RES,TF,470,1/10W,5%,2012	470
R18	S30104727231	RES,TF,4.7k,1/10W,5%,2012	4.7K
R78-79			
R7 R82	S30104737231	RES,TF,47k,1/10W,5%,2012	47K
R90	S30105627231	RES,TF,5.6k,1/10W,5%,2012	5.6K
R29	S30106837231	RES,TF,68k,1/10W,5%,2012	68K
R37-38	S30107517230	RES,TF,750,1/10W,5%,2012	750
R26	S30108217231	RES,TF,820,1/10W,5%,2012	820
C55 C57	S35101035039	CAP,CE,MONO,X7R,0.1uF,50V,K,2012,TA	0.01/63
C18 C20	S35101045331	CAP,CE,MONO,X7R,0.1uF,50V,Z,2012,TA	0.01/63
C23-24			
C41			
C47-50			
C53-54			
C58 C62			
C64 C66			
C493			
C14	S35601012440	CAP,CE,MONO,COG,100PF,50V,J,2012,TA	100P
C4-5	S35602202440	CAP,CE,MONO,COG,22PF,50V,J,2012,TA	22P
C59-60			
C9 C16	S356047072440	CAP,CE,MONO,COG,47PF,50V,J,2012,TA	47P
C22 C33			
X1	S393000030300	X-TAL, 11.0592MHZ,30MMX20PF,HCA9-5	11.0592MHz
IC13	S21500006060	IC,D-F,74HCT574,4,TSSOP20P	74HCT574
KEY BD 4000007510			
LED11	2300030100	LED,RND 3.1MM,RED,DIFF,1U,ST2.5	LTL-1CHE
LED12-15	2300032100	LED,RND 3.1MM,GRN,DIFF,1U,ST2.5	LTL-1CHG
LED16	2318999990	LED DISPLAY A43B/SG4YH	A43B/SG4YH
R76	3096103991	RES,AYR,10K,1/5W,5%,PULL,8U,SI9P	10K
AN2	4418528626	CON WAFER,BOXIF,26P,1.25mm,AN	FE-ST26P
S1-10	4658098710	SW,TACT,VER,RED	JB15LRP2 RED
IC12	S2130003400	IC,TRANSCIVER,74HCT245,TSSOP20P	74HCT245
R48-58	S30101827231	RES,TF,1.8k,1/10W,5%,2012	1.8K
R62-75	S30104717231	RES,TF,470,1/10W,5%,2012	470
C44-C46	S30101045331	CAP,CE,MONO,X7R,0.1uF,50V,Z,2012,TA	0.1U
IC8 IC11	±21500006060	IC,D-F,74HCT574,4,TSSOP20P	74HCT574
JACK B'D 4000007520			
AN1	4355721600	CON ASSY,SH,SP,5264,5395,240mm	ASSY-052P
Z1	2058052180	DIODE,ZEN,500MM,BM,18V,DO-35,TA	18BM
R3	3039102575-T	RES,MF,1K,2W,5%,RA,TA	1K 2W
C1	3408247169	CAP,E,SM,5G,85C,470uF,35V,M,10x20	470/35
EMF1-2	3908609970	FILTER,EML,DSS6NZB2A103QS58	10000qF
JK1	4430002200	JACK,XLR(F),1U,3p,AN,llocking type	XLR/F
R14	S30100007230	RES,TF,0.1/10W,5%,J,2012	0
R15	S30101057231	RES,TF,1M,1/10W,5%,2012	1M
R1-2	S30104727231	RES,TF,4.7k,1/10W,5%,2012	4.7K
C11	S35101045331	CAP,CE,MONO,X7R,0.1uF,50V,Z,2012,TA	0.1U
ASSY			
4115198240		CARD CABLE,FFC,26P,21.25,PL/PL,100MM	
4355721300		CON ASSY,DS,2P,VHR,STRIP,100MM	
5008984920		SPEAKER,UNIT,FULL,2",BOHM,1W,50SK076	
5508411939		FUSE,20MMxT,630MA,250V,K/U/CS	

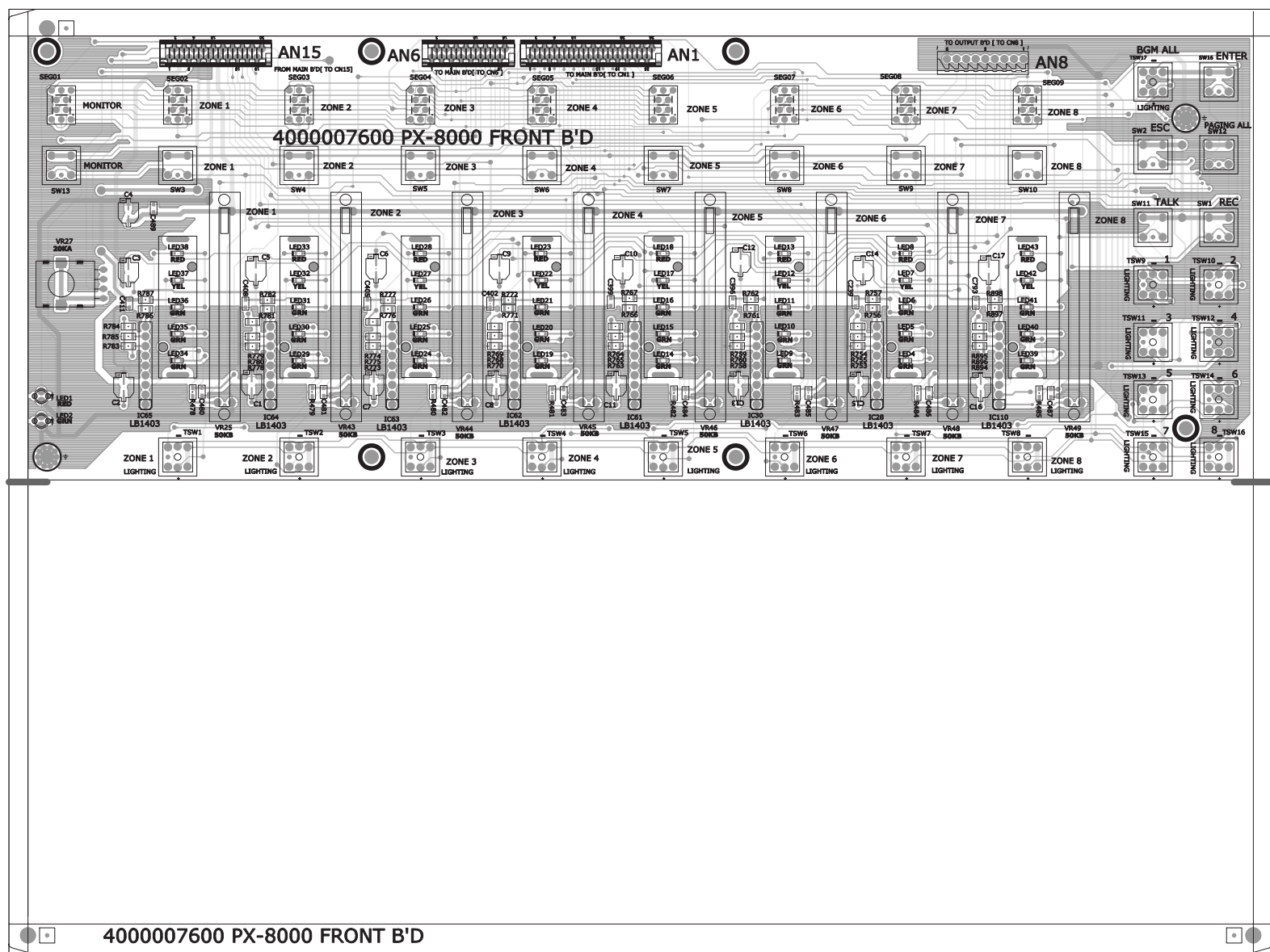
ELECTRICAL PARTS LIST (LM-8000)

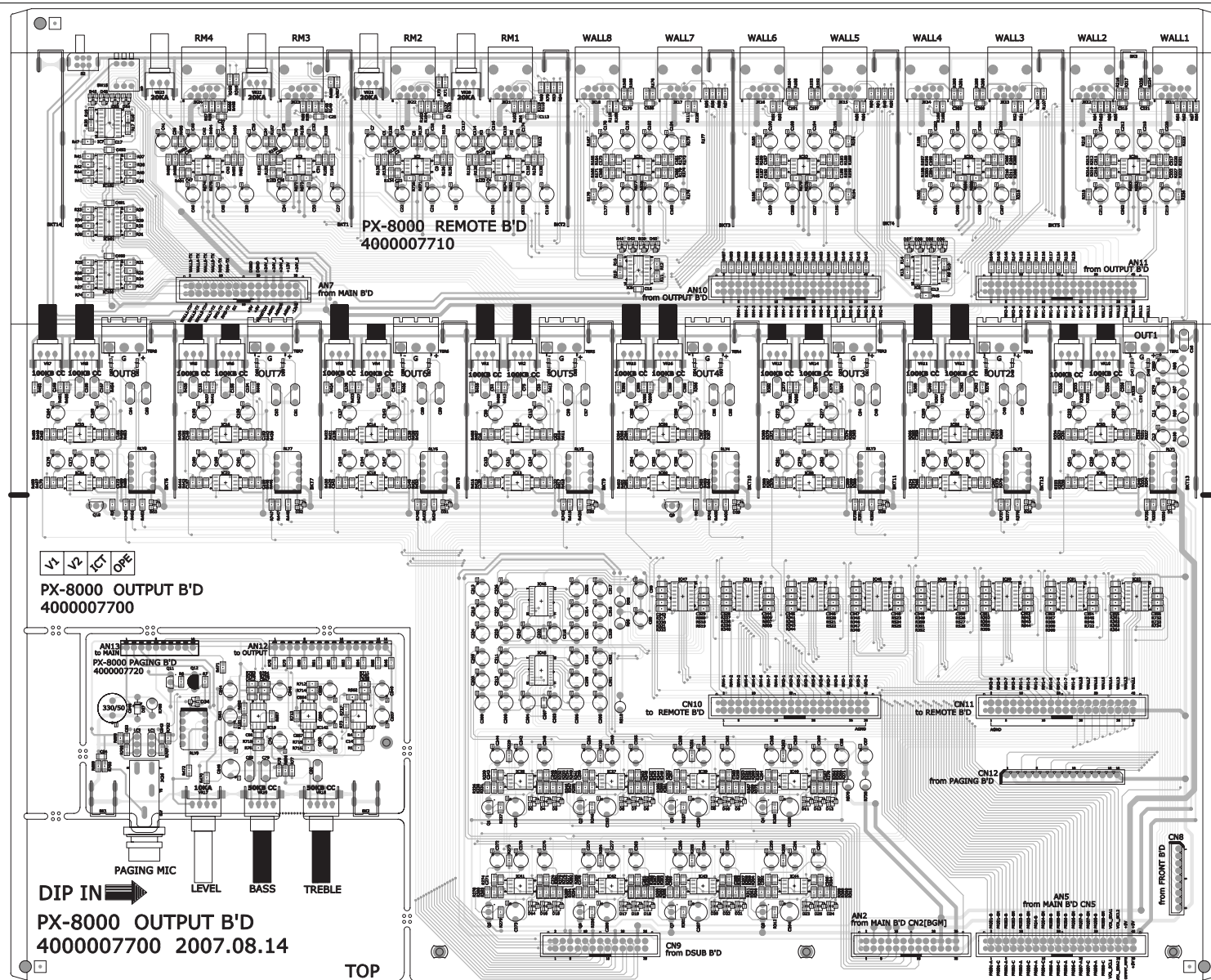
Ref.	Part No.	Description	Value
MAIN B'D 4000008600			
D1	2058100964	DIODE,RE,1A,40V,1N5819,DO-41,TA	1N5819
IC2	2168640978	IC,SW REG,5V,1A,LM2575T-5,T05D	LM2575
R45	3089100275	RES,FS,MF,10,1/4W,5%,RA,R,TA	FR 10
C34	3409222071-T	CAP,E,SM,SG,85C,22uF,50V,M,SP,TA	22/50
C39	3409233147-T	CAP,E,SM,SD,85C,330uF,25V,M,8x11.5,TA	330/25
CN1	4355461901	CON ASSY 4P 50MM LM88A	ASSY-04P
JK3	4408193508	JACK,MODULAR,1U,8P,ST,RJ-45	MODULAR08P
CN5	4428536309	CON WAFER,LOCK(M),9P,2/AN	FMN-BTRK-09P
CN3	4428594010	CON WAFER,BOX(M),10P,2/ST	5532-10P
S3	4658098410	SWROTARY ENCODER EC11B15D1-ZZZ	EC11B15D1
R50	OPEN		open
IC8	S2120001000	IC,MCU,ATMEL,AT89S52,TQFP44	AT89S52
IC5-6	S21275087601	IC,TRANSCIVER,SN75176BD,SOIC8	SN75176BD
IC12	S2150000900	IC,RESET,DS1232LP,u-SOP	DS1232LP
L1	S26103312990	COIL,FER,RADIAL,330uH,TA	330uH
R29	S30100007121	RES,TF,0,1/16W,0.05,1608	0
R27	S30101027121	RES,TF,1K,1/16W,5%,1608	1K
R49	S30101217121	RES,TF,120,1/16W,5%,1608	120
R1 R46-47	S30104737121	RES,TF,47K,1/16W,5%,1608	47K
C17 C32 C37	S35101045321	CAP,CE,MONO,X7R,0.1uF,50V,Z,1608,TA	0.1U
C40 C44 C46			
C493			
C30-31	S35601012430	CAP,CE,MONO,COG,100PF,50V,J,1608,TA	100P
C33 C45	S35602202430	CAP,CE,MONO,COG,22PF,50V,J,1608,TA	22P
X1	S3930000300	X-TAL,11.0592MHZ,30PPM,20PF,H/C49/S	11.0592MHz
DISPLAY B'D 4000008610			
SEG1	2330000400	LED SEGMENT,1U,RED,CA,7.4"10,BS-A284RD-B	BS-A284RD-B
CN2	4428593910	CON WAFER,BOX(M),10P,2/ST	5533-10P
S4	4658099912	SWITCH TACT ITL-01GK	ITL-01GK
R34-41	S30103317121	RES,TF,330,1/16W,5%,1608	330
JACK B'D 4000008700			
VR1-2	3228067330	VR NOBLE VR.XV09211NPP15A20K	20KA
C8 C16 C42	3409222071-T	CAP,E,SM,SG,85C,22uF,50V,M,SP,TA	22/50
C1-2 C7 C15	3409247973-T	CAP,E,SM,SE,85C,4.7uF,50V,M,TA	4.7/50
C26-27			
C4 C10 C18-19	3409710070-T008	CAP,E,NP,85C,10uF,50V,M,5x11,TA	10/50 NP
C29			
EMF1-2	3908609970	FILTER,EMI,DSS6NZ82A103Q558	10000pF
AN1	4428595004	CON WAFER,BOX(M),4P,ST	LWS267-04P
JK4	4438097310	JACK,PHONE,1U,4P,AN	PHONE04P
JK1	4438098410	JACK,PHONE,MINI,1U,4P,AN	PHONE04P
IC7	S2110001200	IC,OP AMP,QUAD,LM324MT,TSSOP 14P	LM324
IC1	S21101080002	IC,OP AMP,NUM2068M,SOP8	NUM2068M
R9	S30100007121	RES,TF,0,1/16W,0.05,1608	0
R21-22	S30101017121	RES,TF,100,1/16W,5%,1608	100
R14	S30101027121	RES,TF,1K,1/16W,5%,1608	1K
R15 R23-26 R31	S30101037121	RES,TF,10K,1/16W,5%,1608	10K
R7-8 R11-12	S30101047121	RES,TF,100K,1/16W,5%,1608	100K
R16-17			
R10	S30101057121	RES,TF,1M,1/16W,5%,1608	1M
R13	S30101227121	RES,TF,1.2K,1/16W,5%,1608	1.2K
R5	S30101237121	RES,TF,12K,1/16W,5%,1608	12K
R6	S30101837121	RES,TF,18K,1/16W,5%,1608	18K
R1-2 R32-33	S30104717121	RES,TF,470,1/16W,5%,1608	470
R18-20	S30104727121	RES,TF,4.7K,1/16W,5%,1608	4.7K
R3-4	S30104737121	RES,TF,47K,1/16W,5%,1608	47K
R28 R30 R42-43	S30106827121	RES,TF,6.8K,1/16W,5%,1608	6.8K
C11-12	S35101024321	CAP,CE,MONO,X7R,1000pF,50V,J,1608,TA	0.001U
C9 C13	S35101045321	CAP,CE,MONO,X7R,0.1uF,50V,Z,1608,TA	0.1U
C6	S35601512430	CAP,CE,MONO,COG,150PF,50V,J,1608,TA	150P
C3 C5 C14 C20	S35602202430	CAP,CE,MONO,COG,22PF,50V,J,1608,TA	22P
C22-23	S35602212430	CAP,CE,MONO,COG,220PF,50V,J,1608,TA	220P

TOP AND BOTTOM VIEW OF P.C.BOARD (PX-8000)

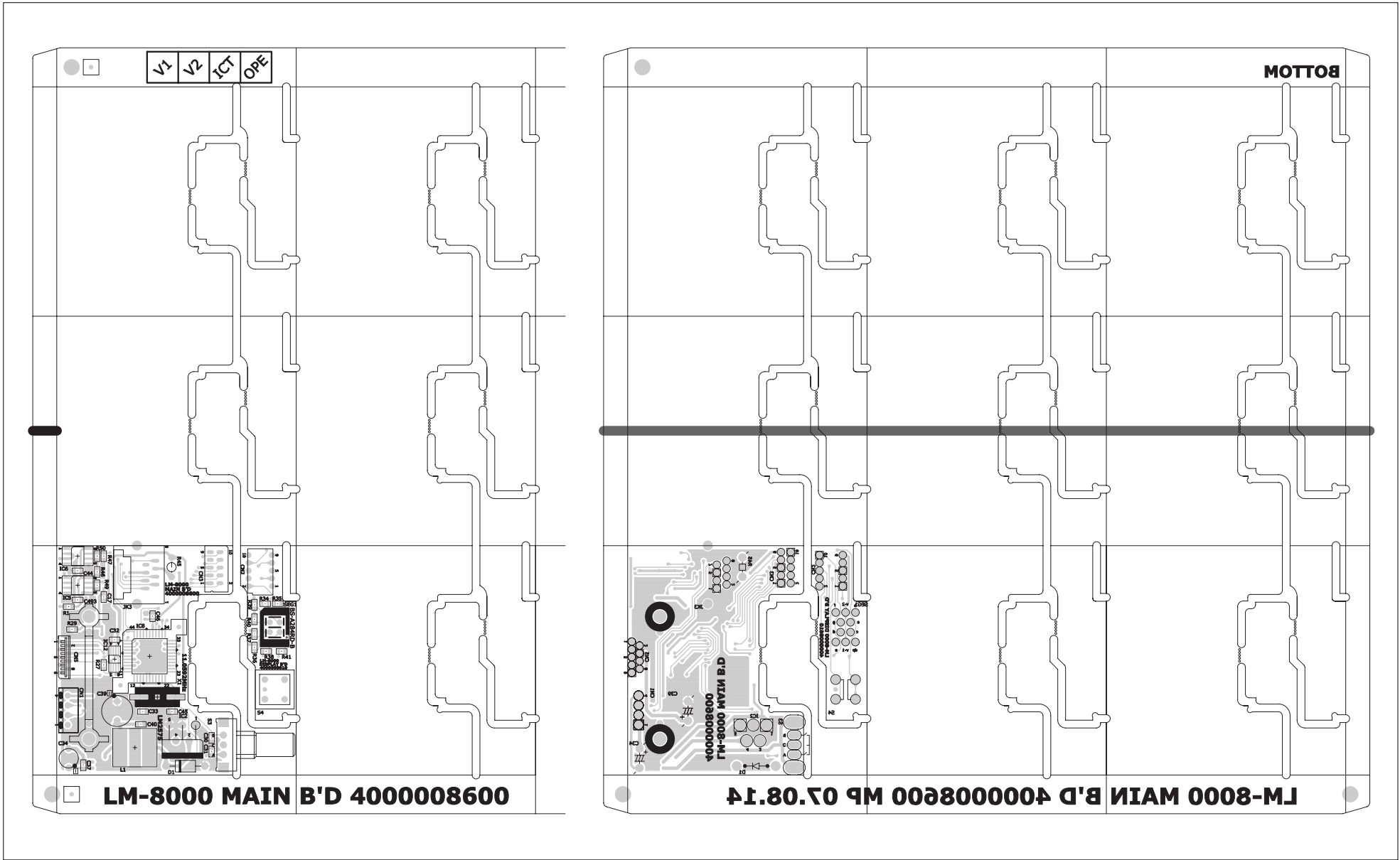


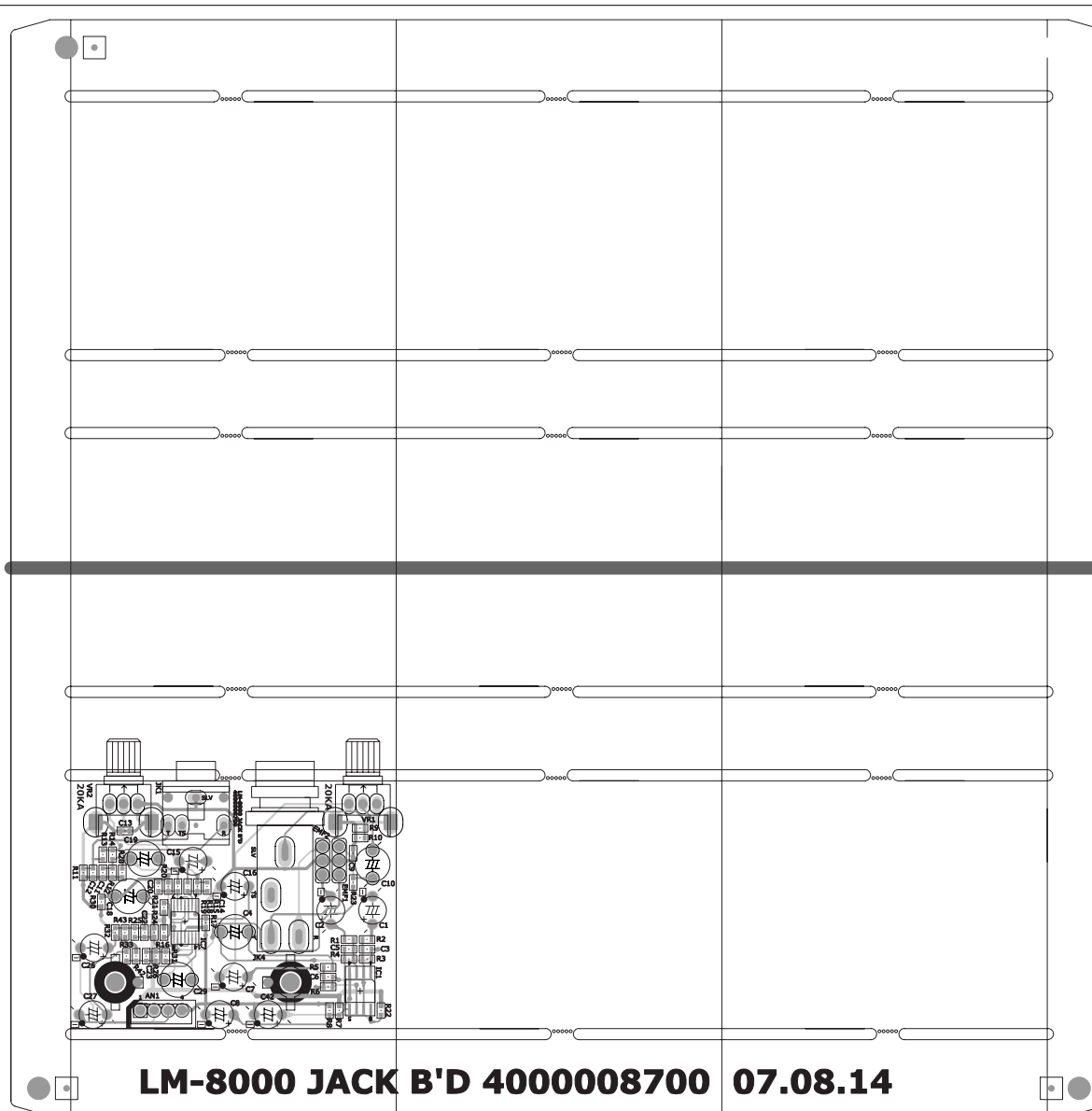


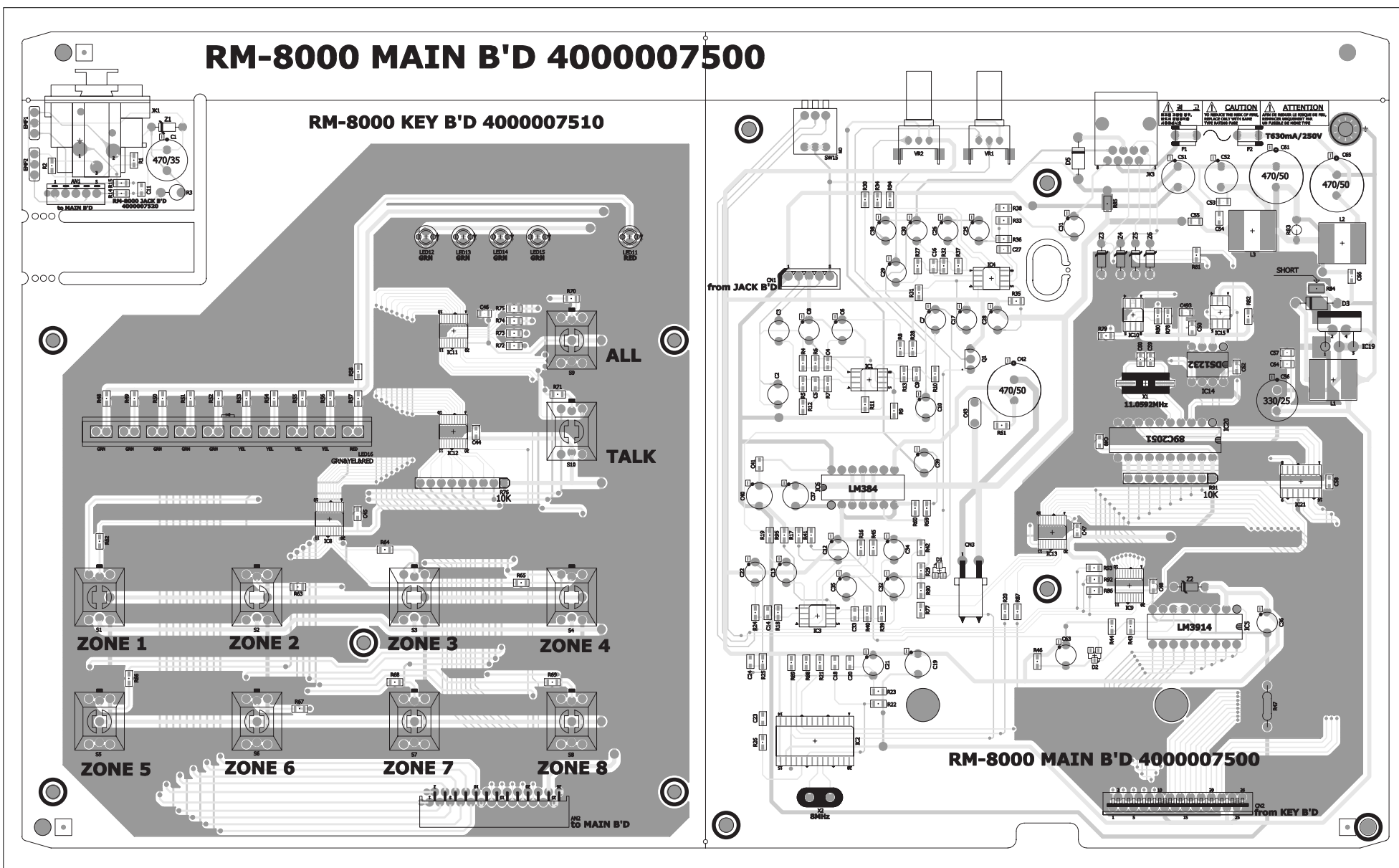




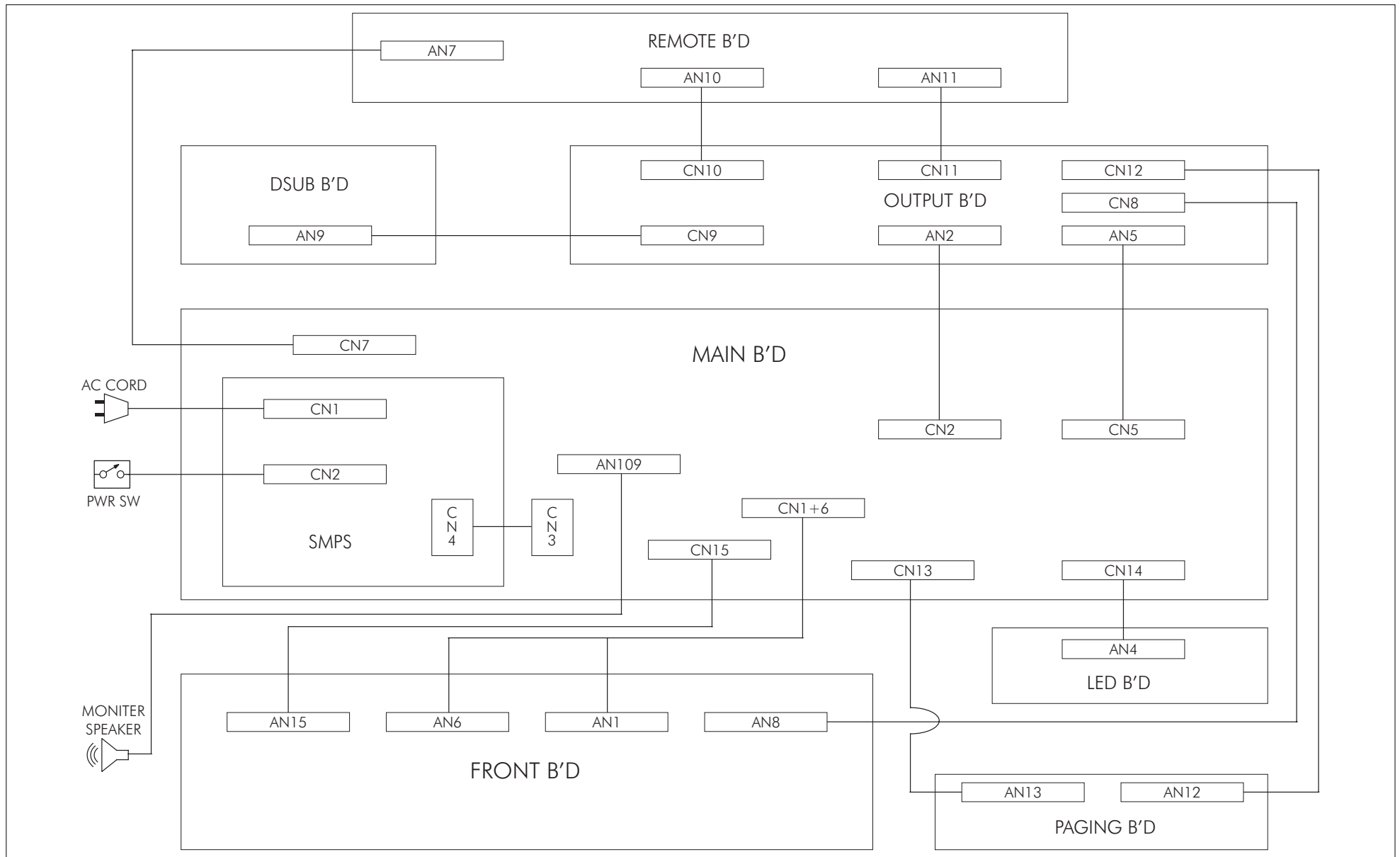
TOP AND BOTTOM VIEW OF P.C.BOARD (LM-8000)



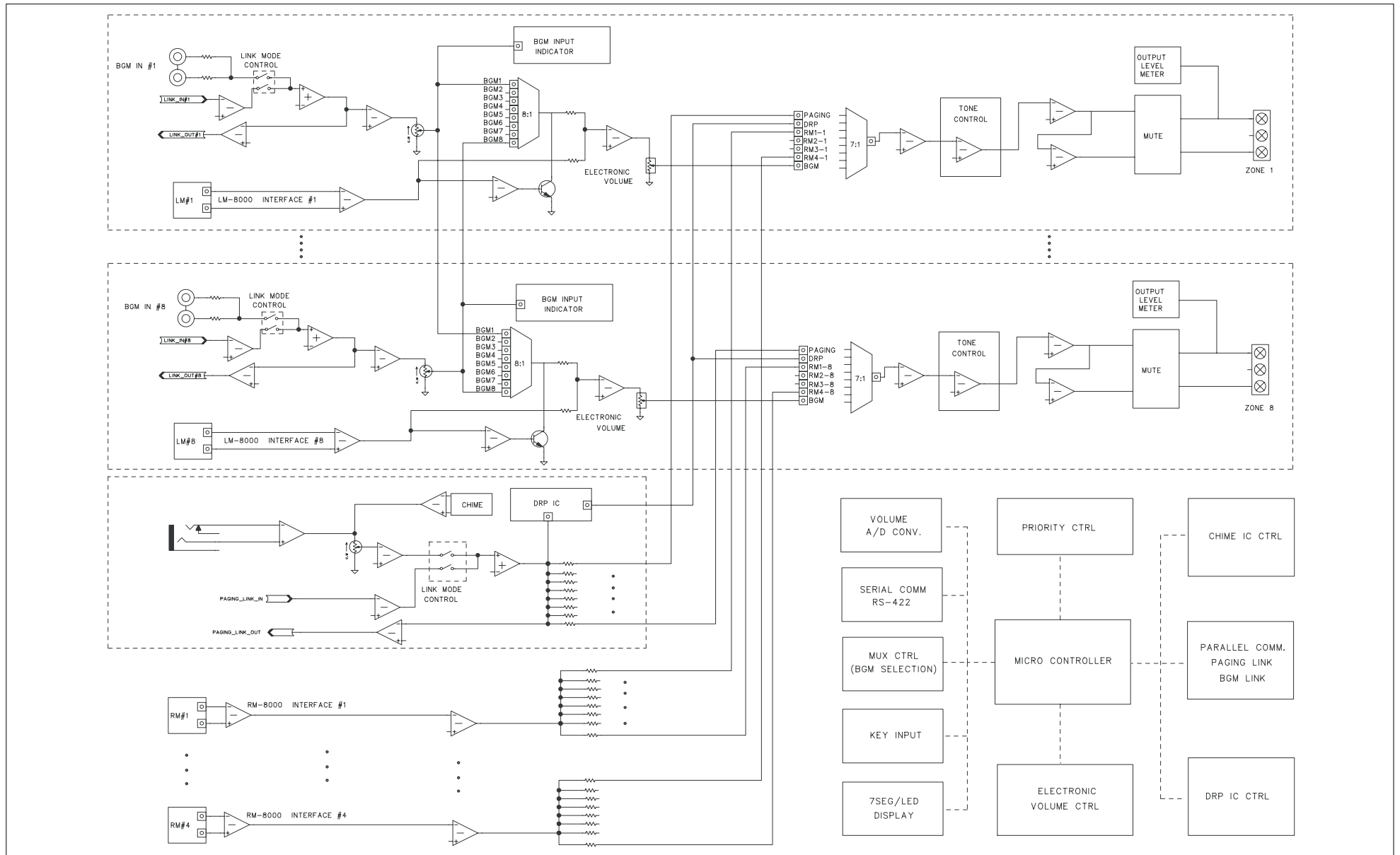




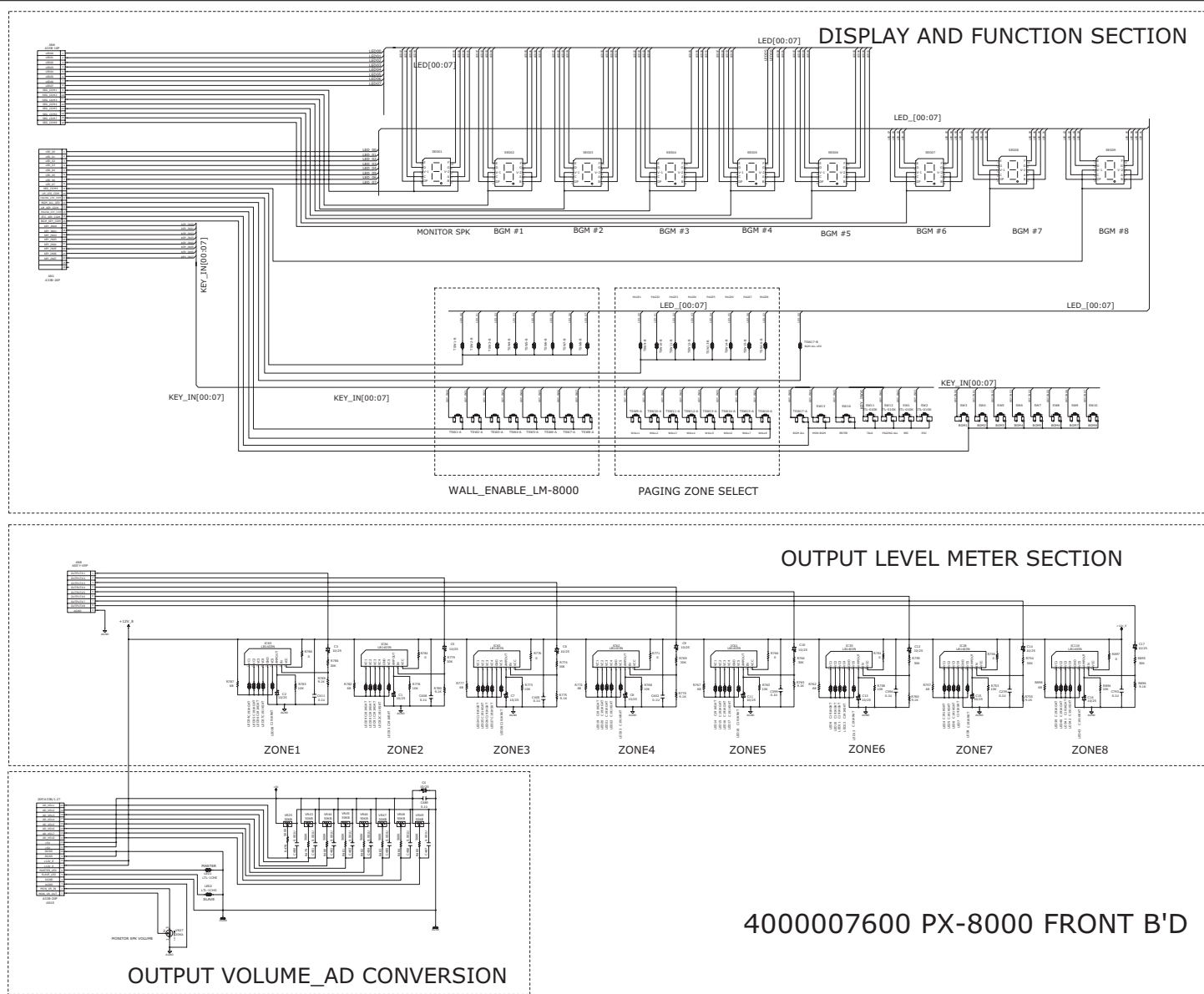
WIRING DIAGRAM



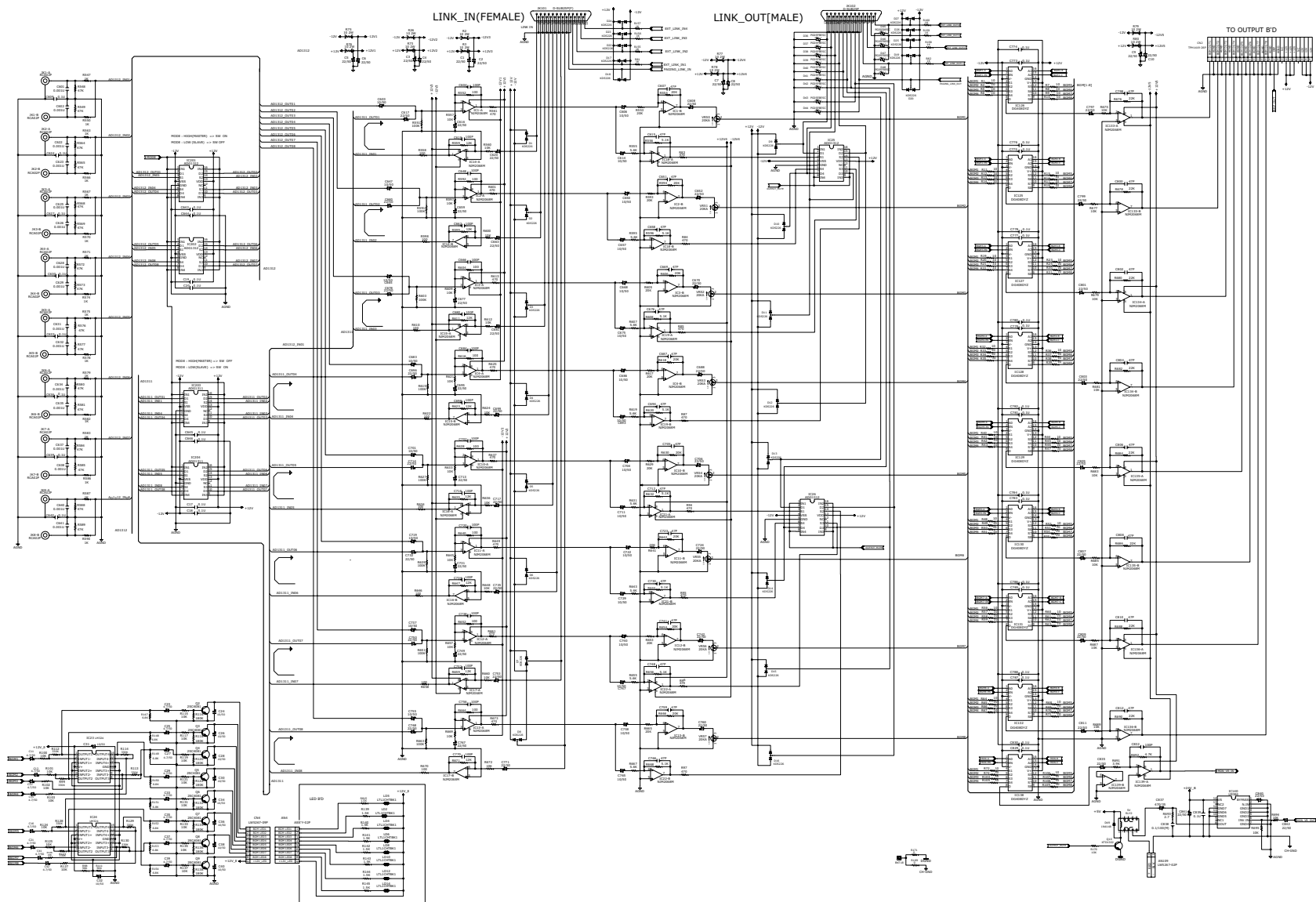
BLOCK DIAGRAM



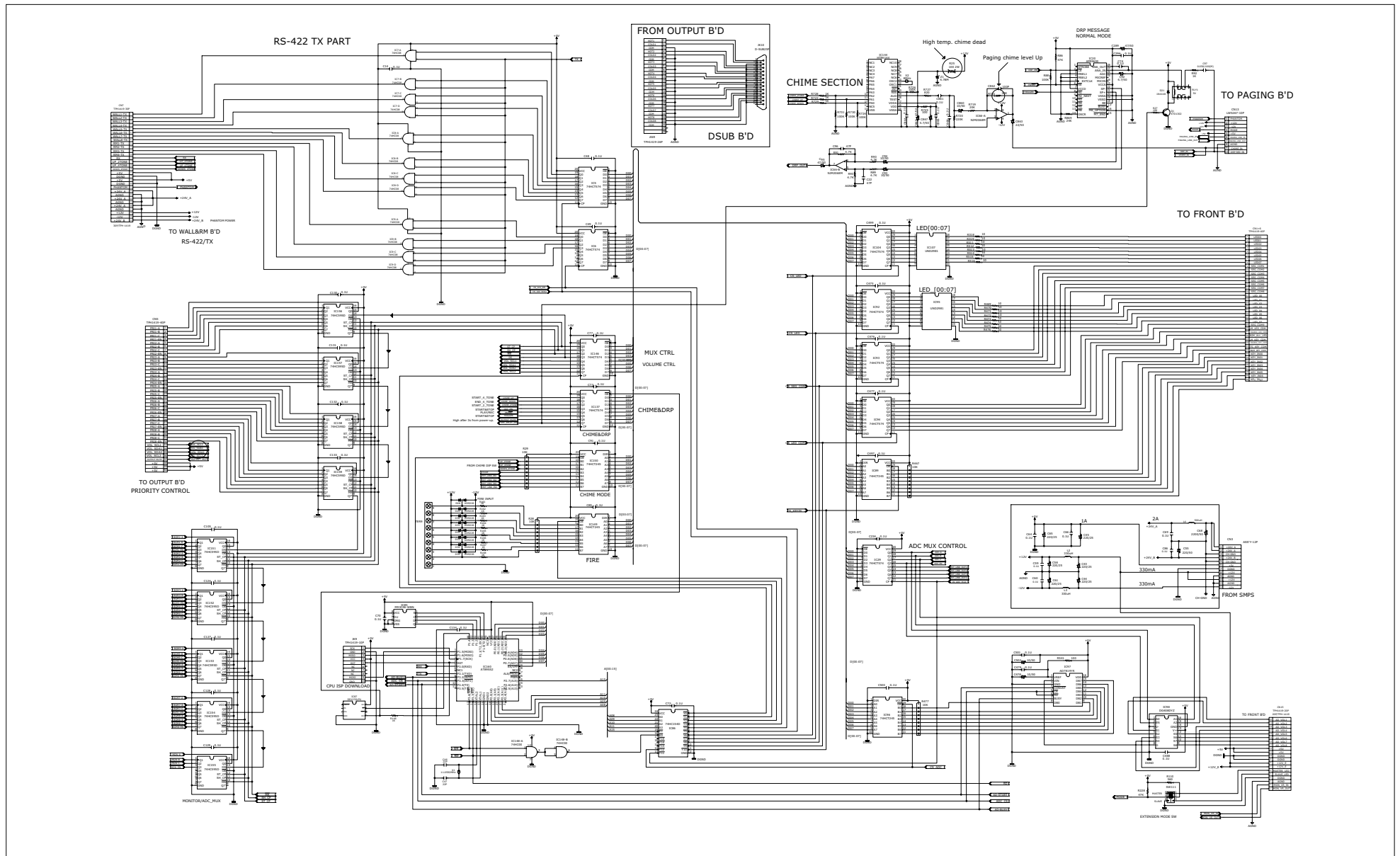
SCHEMATIC DIAGRAM (PX-8000)



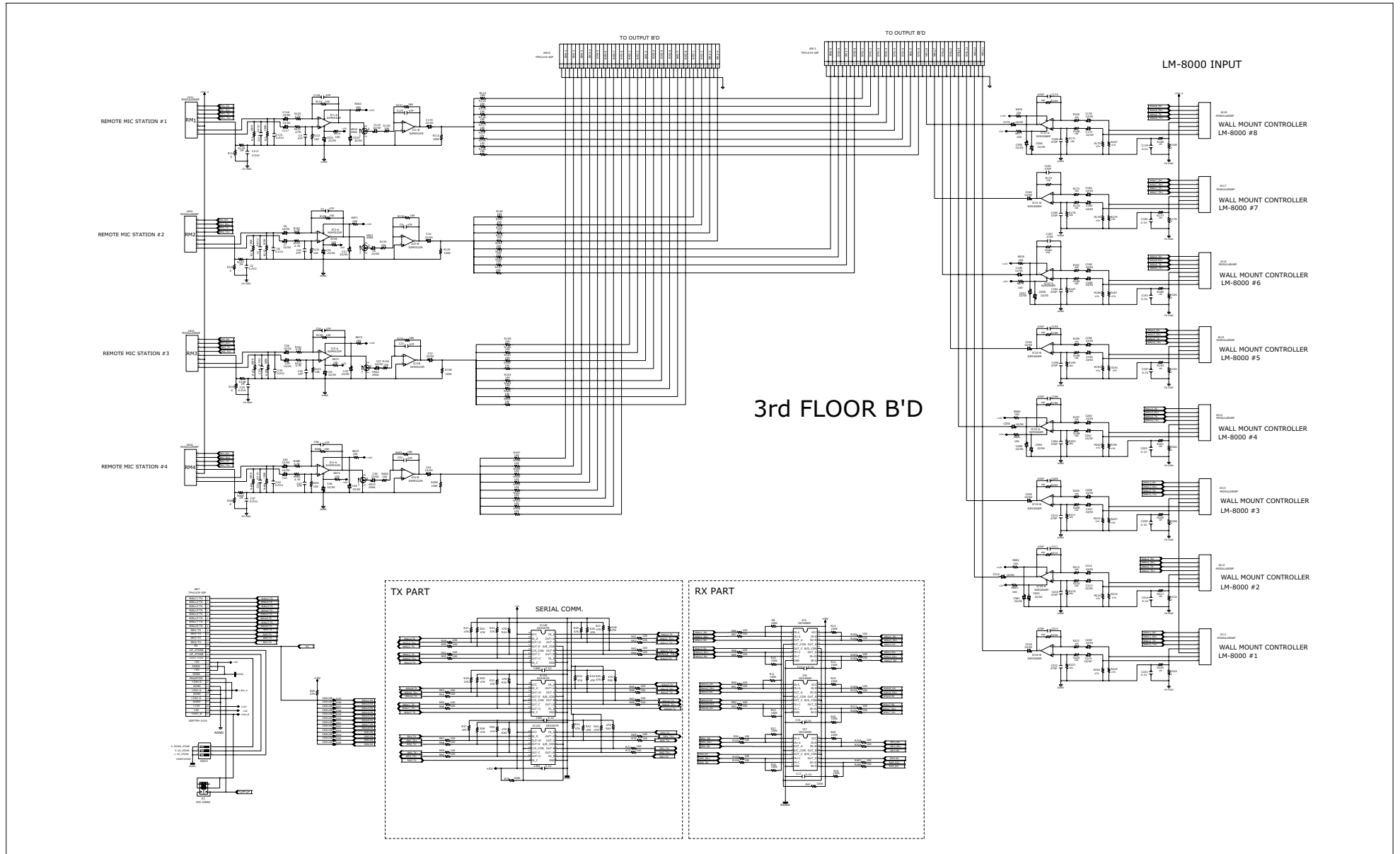
SCHEMATIC DIAGRAM (PX-8000)



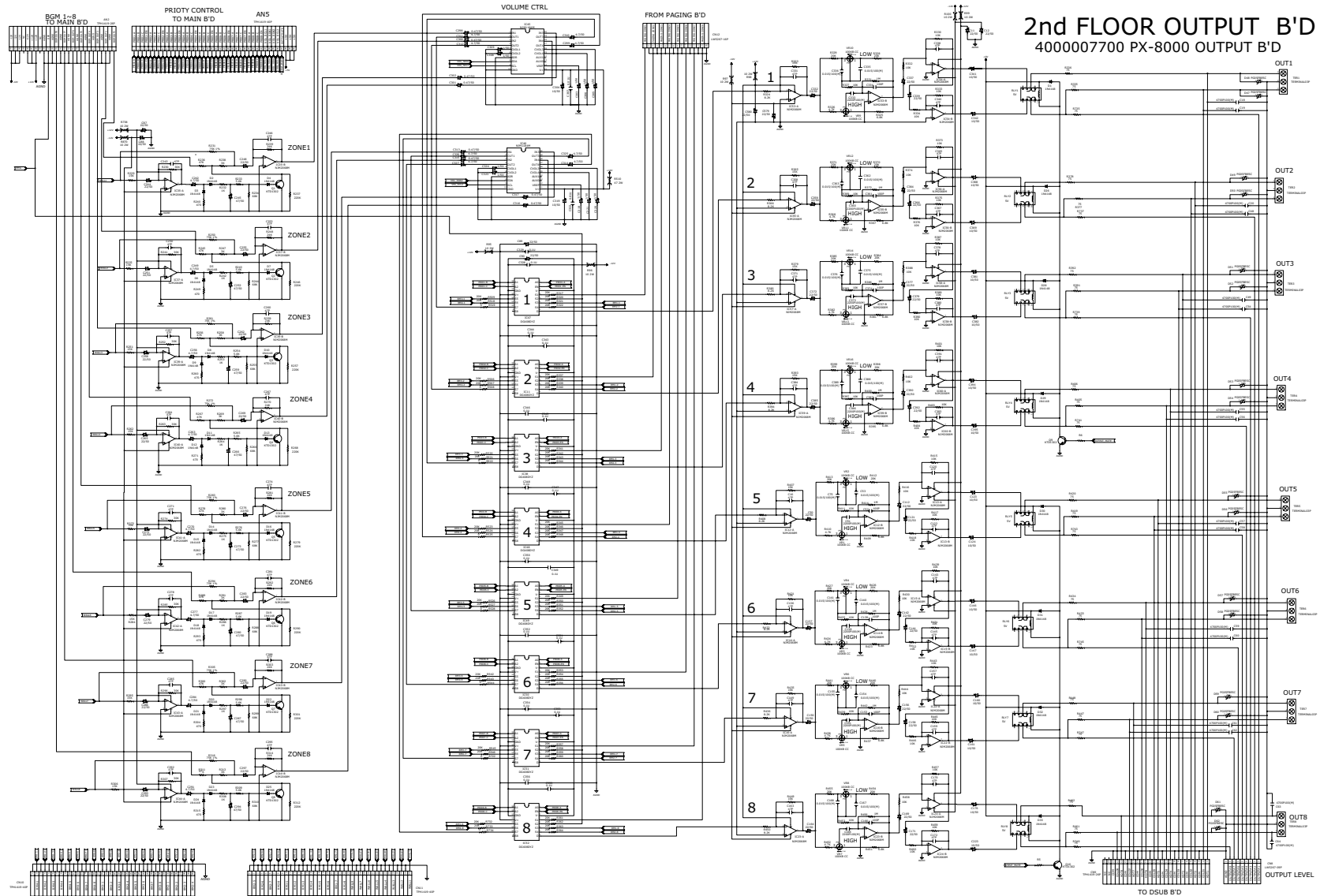
SCHEMATIC DIAGRAM (PX-8000)



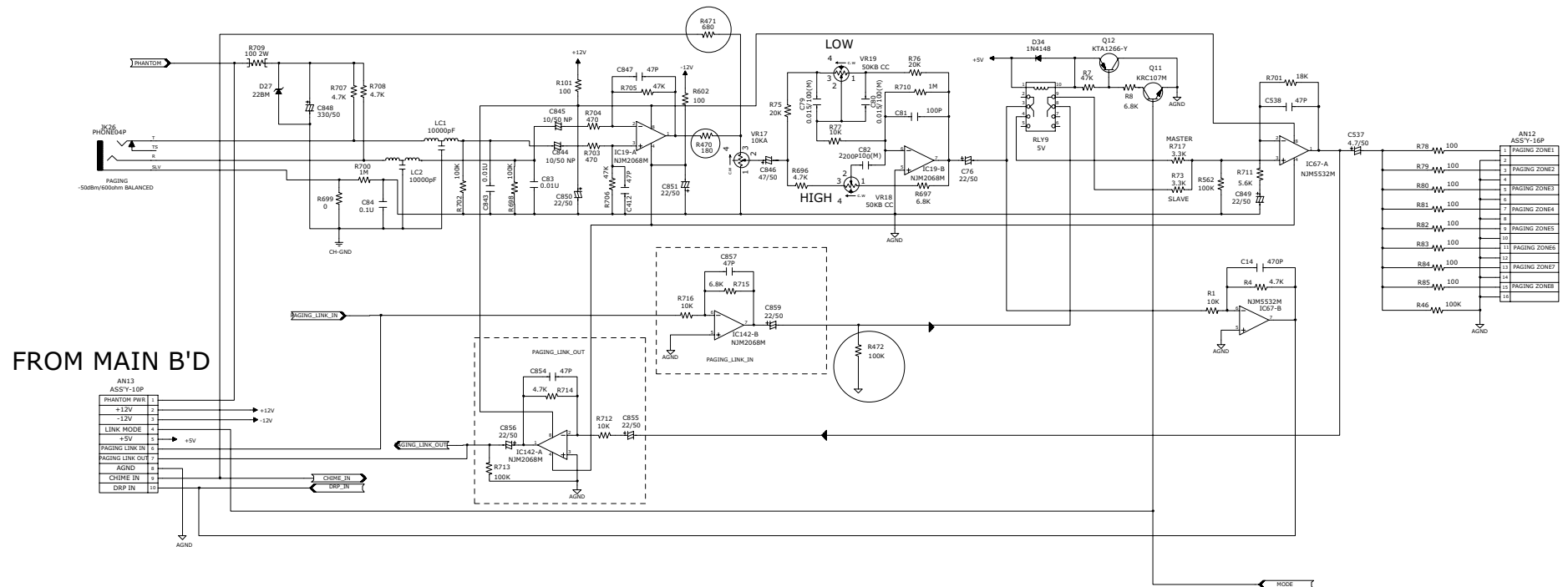
SCHEMATIC DIAGRAM (PX-8000)



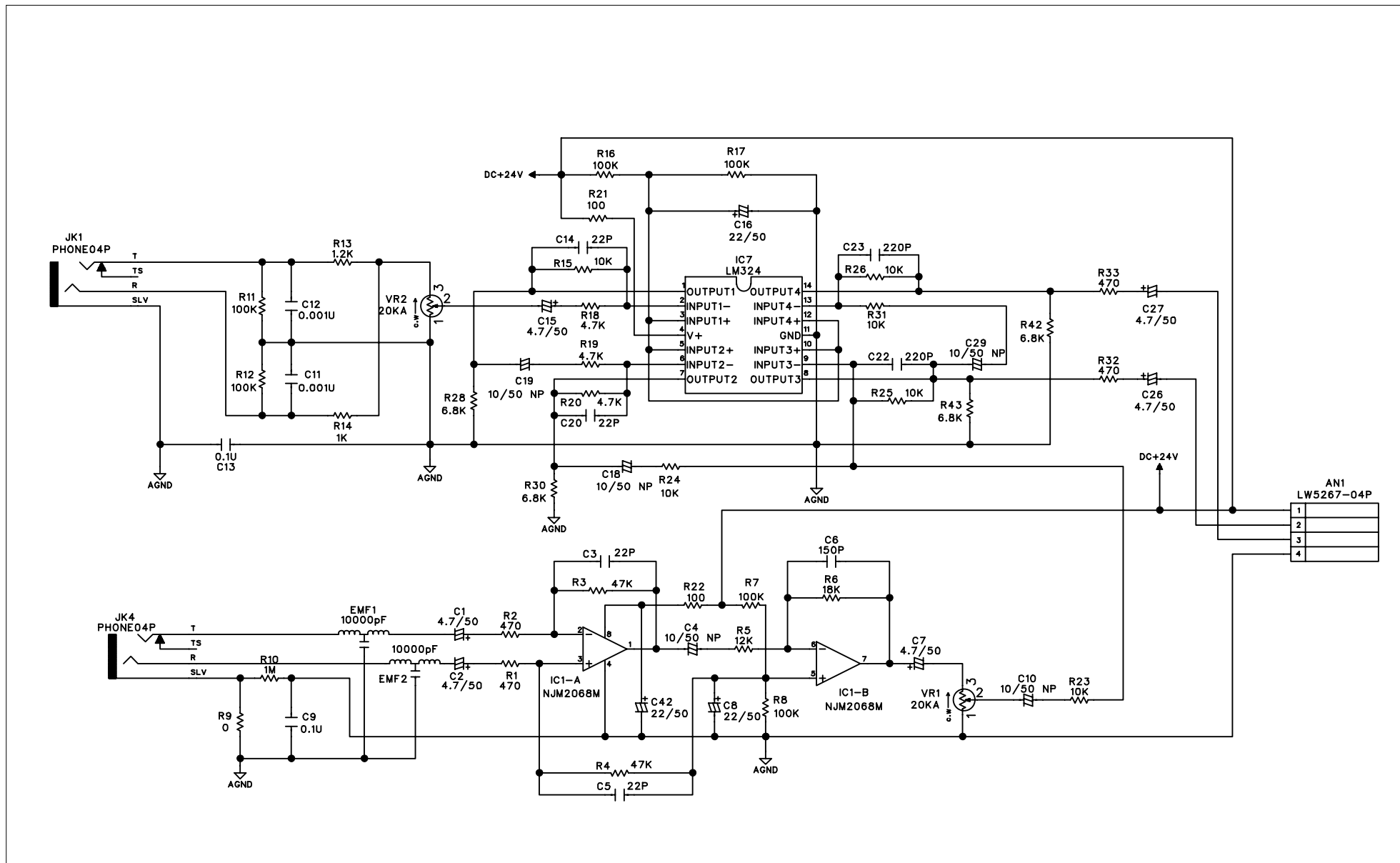
SCHEMATIC DIAGRAM (PX-8000)



PAGING MIC B'D 4000007720

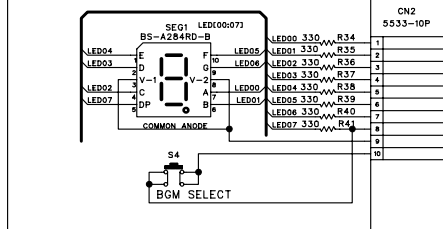


SCHEMATIC DIAGRAM (LM-8000)

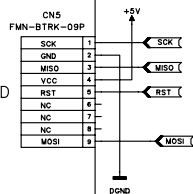


SCHEMATIC DIAGRAM (LM-8000)

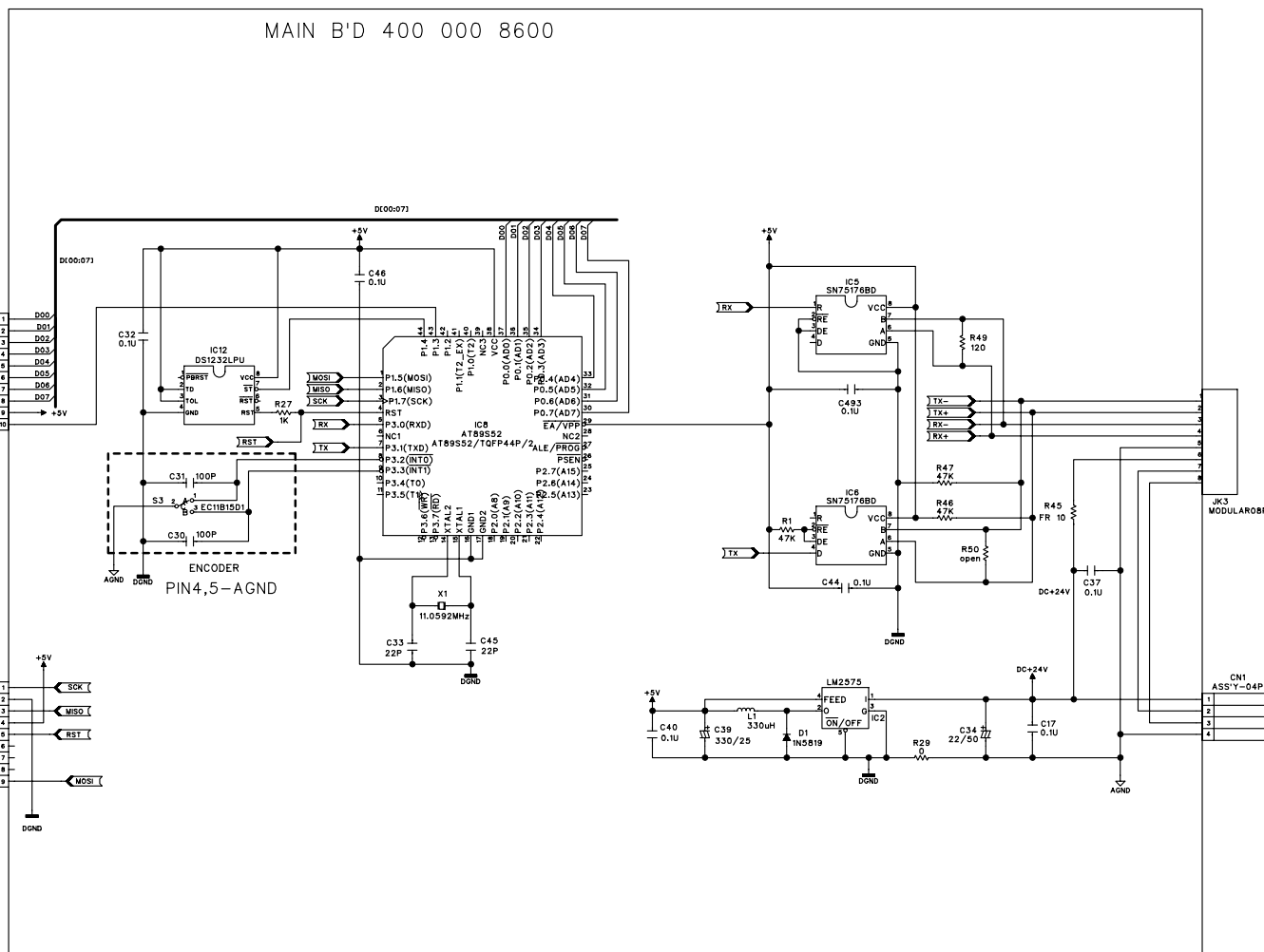
DISPLAY B'D 400 000 8610



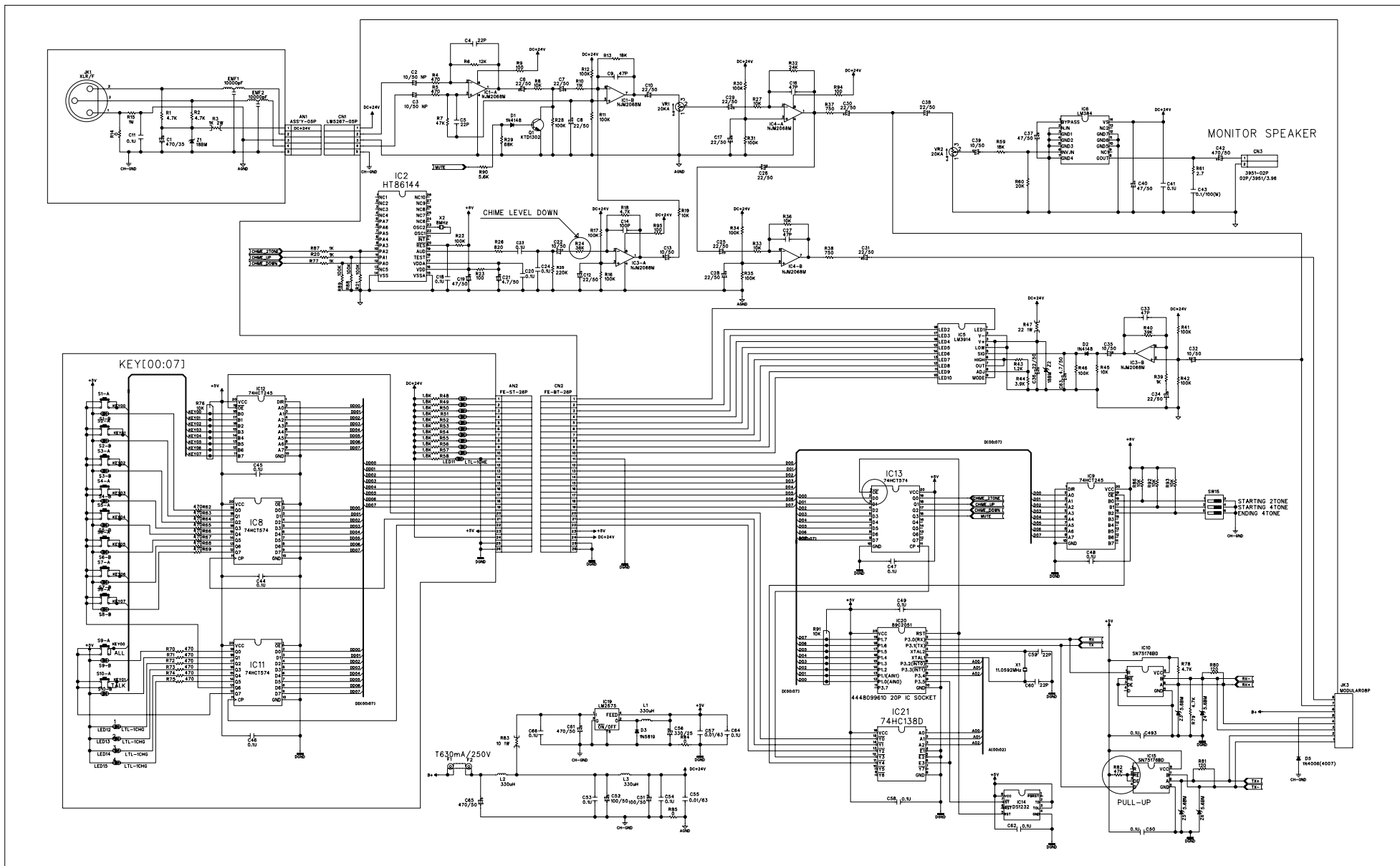
MICOM DOWNLOAD



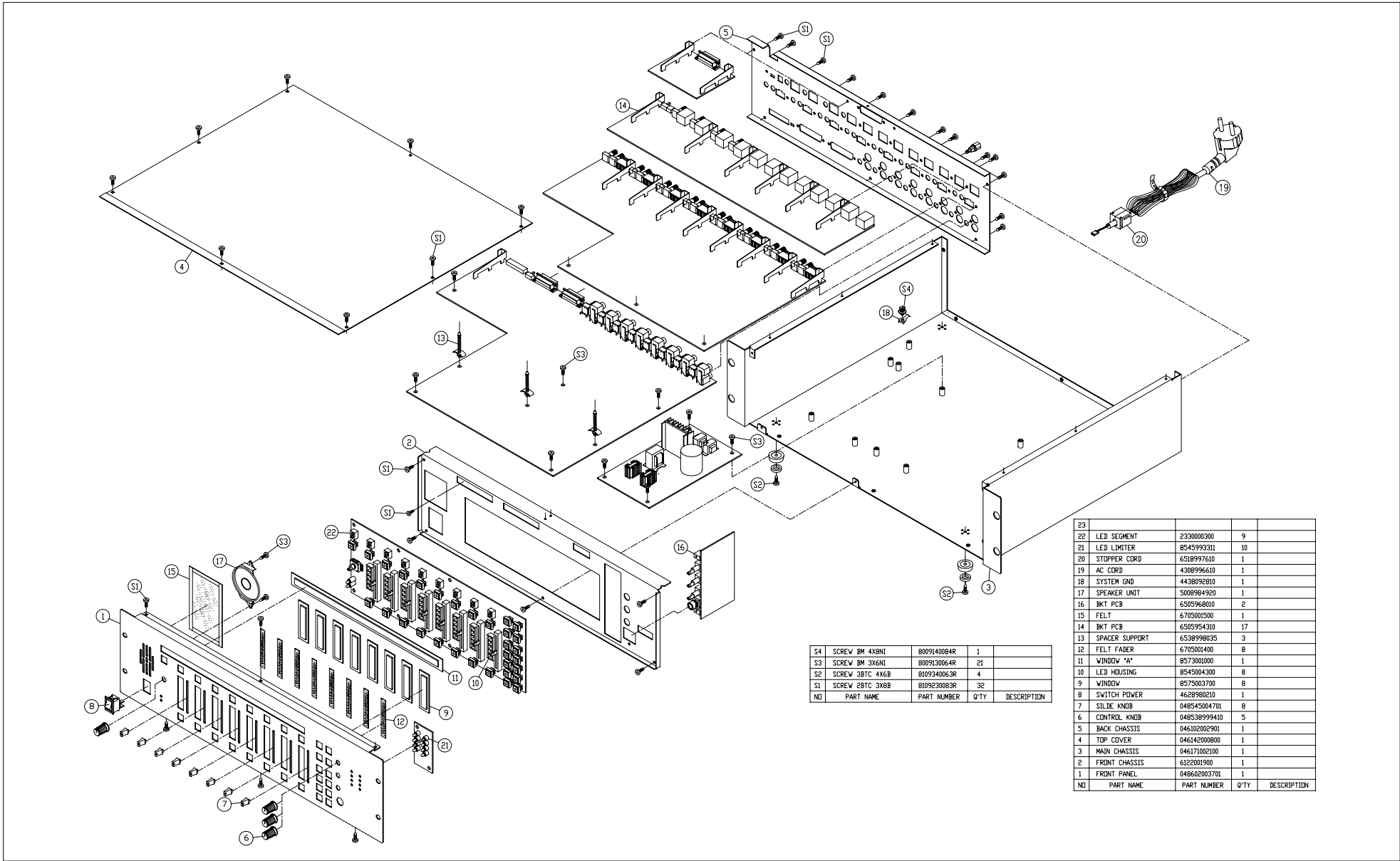
MAIN B'D 400 000 8600



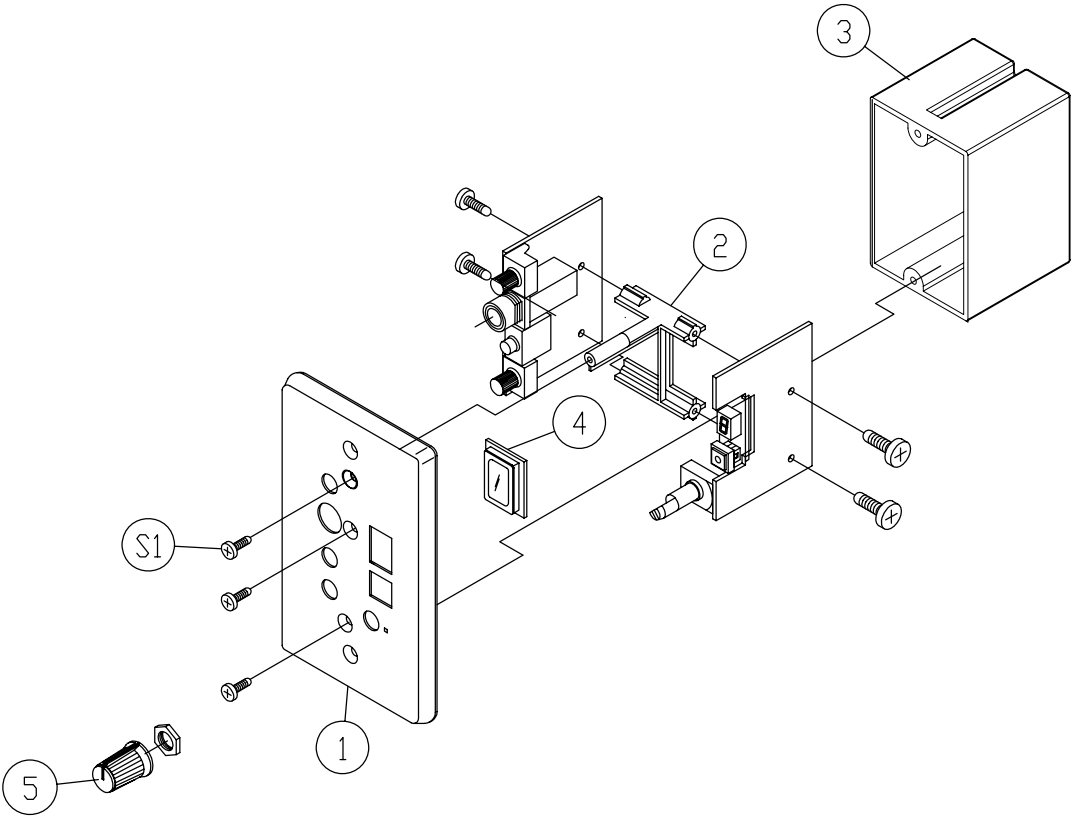
SCHEMATIC DIAGRAM (RM-8000)



EXPLODED VIEW OF CABINET & CHASSIS / MECHANICAL PARTS LIST (PX-8000)



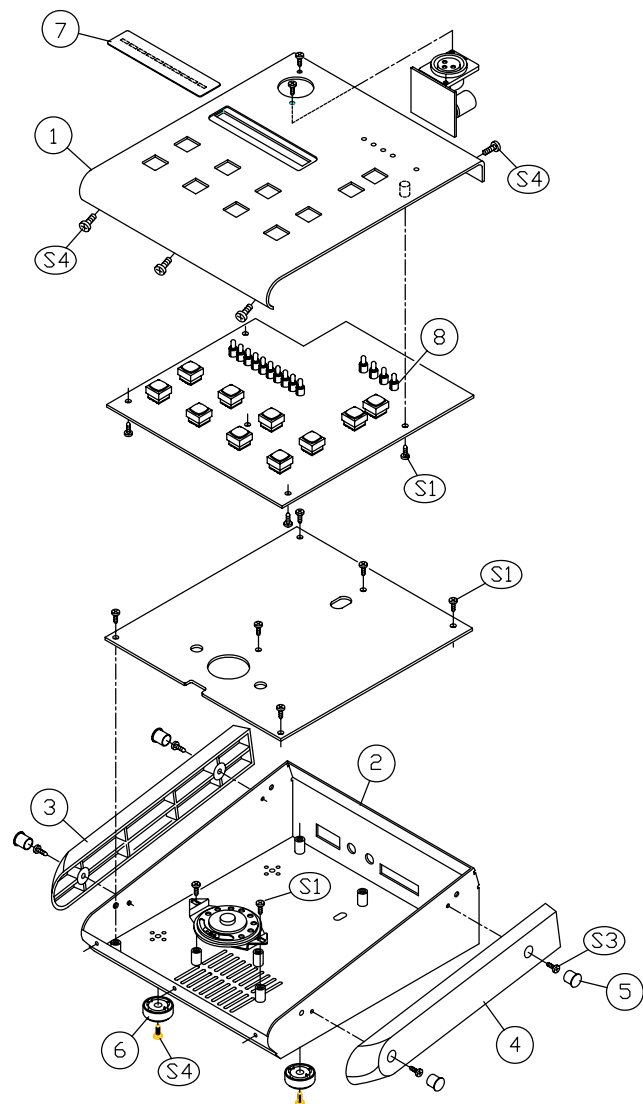
EXPLODED VIEW OF CABINET & CHASSIS / MECHANICAL PARTS LIST (LM-8000)



S1	SCREW 2BTC 3X8B	8095996510R	7	
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5	KNOB CONTROL	048543987017	1	
4	WINDOW	048575986810	1	
3	BOTTOM COVER	8545004600	1	
2	GUIDE	8545004500	1	
1	FRONT PANEL	048605000401	1	
No.	PART NAME	PART NUMBER	Q'TY	REMARK

EXPLODED VIEW OF CABINET & CHASSIS / MECHANICAL PARTS LIST (RM-8000)



S5	SCREW #3BTC 4X8B	8109340083	4	
S4	SCREW #3BTC 3X6N	8109330064	4	
S3	SCREW #3BTC 3X6B	8095996520	4	
S2	DOT SCREW (2BTC 3*10B)	8095996520	2	
S1	SCREW BM 3X6NI	8095996520	11	

9				
8	LED LIMITER	8545993311	5	H=5.2
7	INLAY	8575987310	1	
6	FOOT	056335999520	4	
5	BUSHING CAP	6538995720	4	
4	SIDE PAD R	8543978520	1	
3	SIDE PAD L	8543978510	1	
2	MAIN CHASSIS	6122687810	1	
1	FRONT PANEL	8602962210	1	
No.	PART NAME	PART NUMBER	Q'TY	REMARK