

M-1000

24bit/96kHz 56bit Internal Processing
 10CH DIGITAL LINE MIXER

SERVICE NOTES *Issued by RJA*

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SPECIFICATIONS

M-1000: 10ch DIGITAL LINE MIXER

- Signal Processing
AD Conversion: 24 bits, 64 times oversampling
DA Conversion: 24 bits, 128 times oversampling
Internal Processing: 56 bits
Sampling Frequency: 96 kHz, 48 kHz, 44.1 kHz
- Analog Input
Connector: 1/4 inch phone type (unbalanced)
Input Level: -10/+4 dBu (selectable)
Maximum Input Level: +22 dBu (Input Level: +4 dBu)
- Digital Input
Connector: COAXIAL, OPTICAL
Format: IEC60958/EIAJ CP-1201 [TYPE II/Consumer]
Number of Bits: 24 bits
Sampling frequency: Digital Input 1: 96 kHz--32 kHz (variable)
Digital Input 2--4: 96 kHz, 88.2 kHz, 48 kHz, 44.1 kHz, 32 kHz
- Analog Output
Connector: XLR-3-31 type (balanced)
1/4 inch phone type (unbalanced)
Output Level: +4 dBu (XLR-3-31: Master Out)
-10 dBu (1/4 inch phone: Monitor Out)
- Digital Output
Connector: COAXIAL, OPTICAL
Format: IEC60958/EIAJ CP-1201 [TYPE II/Consumer]
Number of Bits: 24 bits
- Digital Output
S/N Ratio: 102 dB or less (IHF-A. typ.)
Frequency Response: 96.0 kHz: 20 Hz--40 kHz (+0.1/-2.0 dB)
48.0 kHz: 20 Hz--22 kHz (+0.1/-2.0 dB)
44.1 kHz: 20 Hz--20 kHz (+0.1/-2.0 dB)
- USB Audio
Sampling frequency: 96 kHz, 48 kHz, 44.1 kHz
Number of Bits: 24 bits
- Word Clock Terminal
Connector: BNC
Input Impedance: 75 ohms (terminator on)
Input Signal Level: TTL Level
Input Signal Frequency: 96 kHz, 88.2 kHz, 48 kHz, 44.1 kHz, 32 kHz
- Indicators
PEAK, LOCK, LEVEL METER, CLOCK SOURCE, SAMPLE RATE
- Power Supply
AC 117 V, AC 230 V or AC 240 V
- Power Consumption
10 W
- Dimensions
482 (W) x 167 (D) x 44 (H) mm
19 (W) x 6-5/8 (D) x 1-3/4 (H) inches
EIA-1U rack mount type

- Weight
1.9 kg
4 lbs 4 oz
- Accessories
Owner's Manual English (#72129567)
AC Cord 120 V (#00894378)
AC Cord 230 V (#00894389)
AC Cord 240 VE (#00907001)
AC Cord 240 VA (#23495124)
Driver CD-ROM (Windows/Macintosh) (#03128234)
USB Cable (#02239578)
Rubber Foot (#00564612)

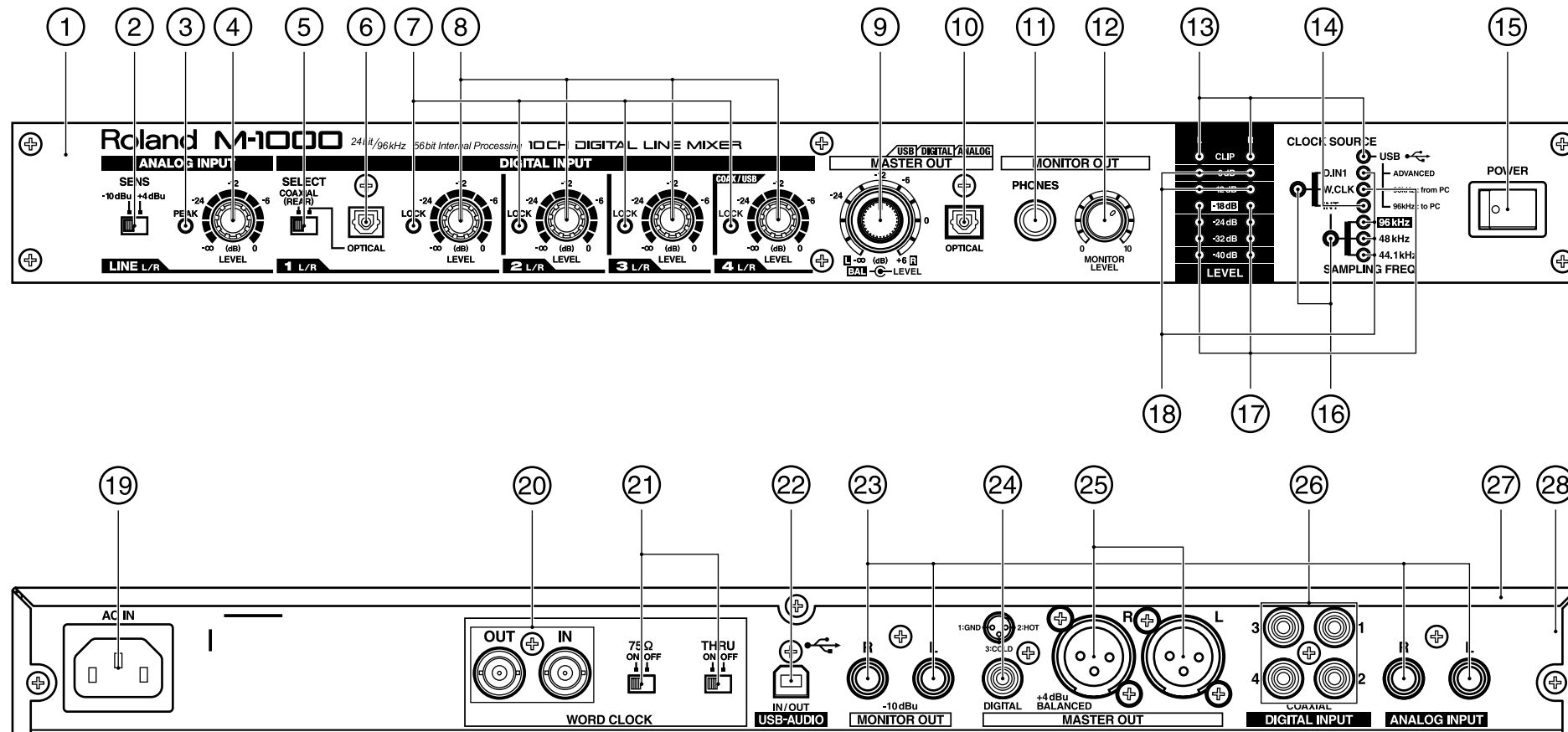
* 0 dBu = 0.775 V rms

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

LOCATION OF CONTROLS PARTS LIST

No	Part Code	Part Name	Description	Q'ty
1	03016812	FRONT PANEL		1
2	03016956	SLIDE SWITCH	SSSU121700	1
3	03019245	LED (RED)	L-934CB/11D (HOUSING)	1
4	03124834	U R-KNOB	S1 BLK BLU	1
4	03230634	9M/M ROTARY POT.	RK09K1110D3G	5
5	03019201	SLIDE SWITCH	SSSU11400	3
6	02565401	OPTICAL CONNECTOR RX	GP1FA501RZ	1
7	03019223	LED (GREEN)	L-934CB/1GD (HOUSING)	4
8	03124845	U R-KNOB	S1 BLK RED	4
8	03230634	9M/M ROTARY POT.	RK09K1110D3G	5
9	03017012	9M/M ROTARY POT.	RK0972210C0N 10KBx2	1
9	22485150	F O-KNOB	248-150 M BLK	1
9	22485188	M R-KNOB	248-188 MF BLK	1
10	02565390	OPTICAL CONNECTOR TX	GP1FA501TZ	1
11	00569278	6.5MM JACK	LGR4609-7100	5
12	01340412	P R-KNOB	SF-A BLK/LCG	1
12	03230645	9M/M ROTARY POT.	RK09K12A0D08	1
13	00785856	LED (RED)	SLR-342VR3F	3
14	02902278	LED (BLUE)	L-934MBD	1
15	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1
16	03016912	TACT SWITCH	SKQNALD010	2
17	02015623	LED (GREEN)	SLR-342MG3F	9
18	03016901	LED (YELLOW)	SLR-342DU3F	8
19	03126478	WIRING AC ASSY		1
20	01902801	BNC CONNECTOR	COH2183-02	1
21	03019201	SLIDE SWITCH	SSSU11400	3
22	02781101	USB CONNECTOR	YKF45-0020	1
23	00569278	6.5MM JACK	LGR4609-7100	5
24	01343723	RCA(PIN) JACK	YKC21-3117(ORANGE)	1
25	00679767	XLR CONNECTOR	NC3MAH	2
26	03017834	RCA JACK(PIN)	YKC21-4481 (ORANGE)	1
27	03017034	TOP COVER		1
28	03016856	CHASSIS		1

LOCATION OF CONTROLS



EXPLODED VIEW PARTS LIST

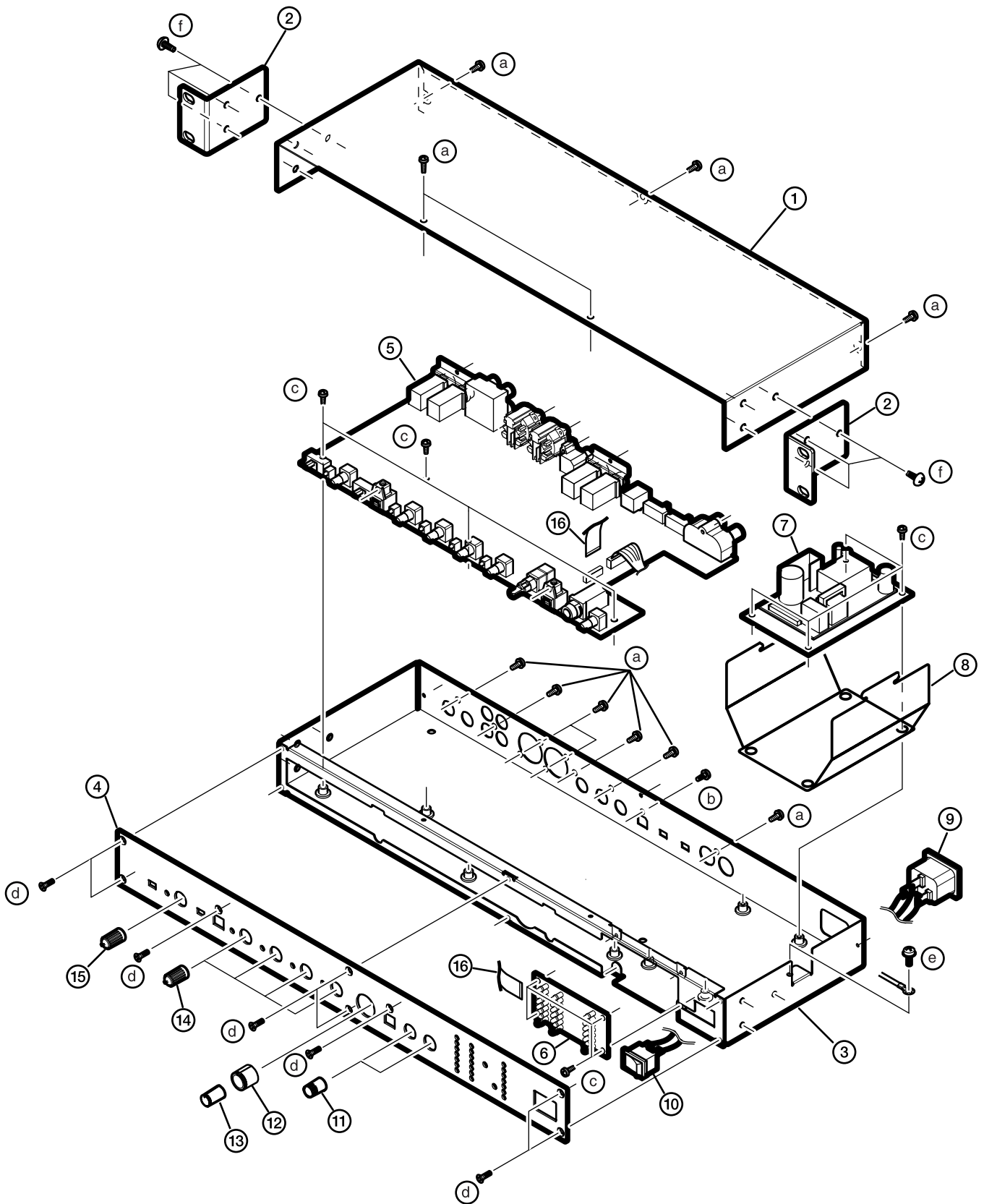
[Parts]

No.	Part Code	Part Name	Description	Q'ty
1	03017034	TOP COVER		1
2	03124901	RACK MOUNT ANGLE 1U		2
3	03016856	CHASSIS		1
4	03016812	FRONT PANEL		1
5	72128790	MAIN BOARD ASSY		1
6	72128801	PANEL BOARD ASSY		1
7	72128812	POWER BOARD ASSY		1
8	03121967	INSULATING SHEET		1
9	03126478	WIRING AC ASSY		1
10	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1
11	01340412	P R-KNOB	SF-A BLK/LCG	1
12	22485150	F O-KNOB	248-150 M BLK	1
13	22485188	M R-KNOB	248-188 MF BLK	1
14	03124845	U R-KNOB	S1 BLK RED	4
15	03124834	U R-KNOB	S1 BLK BLU	1
16	03016845	BAN CARD	BNCD-P=1.00-K-14-120	1

[Screws]

No.	Part Code	Part Name	Description	Q'ty
a	40011101	SCREW 3x8	BINDING TAPTITE B BZC	14
b	40012534	SCREW 3x6	BINDING TAPTITE S FE BZC	1
c	40011056	SCREW 3x6	BINDING TAPTITE B ZC	12
d	40455167	SCREW 3x8	OVAL HEAD TAPTITE B NI	8
e	40342989	SCREW M4x8	PAN W/EX.TOOTH WASHER	1
f	40560467	SCREW 4x8	TURSS HEAD TAPTITE S NI	6

EXPLODED VIEW



PARTS LIST

SAFETY PRECAUTIONS:

The parts marked Δ have safety-related characteristics. Use only listed parts for replacement.

CONSIDERATION ON PARTS ORDRING

When ordering any parts listed in the parts list, please specify the following items in the order sheet.

	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
Ex.	10	22575241	Sharp Key	C-20/50
	15	2247017300	Knob (orange)	DAC-15D

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

NOTE: The parts marked # are new. (initial parts)

MB -> MAIN BOARD ASSY, PB -> PANEL BOARD ASSY, PW -> POWER BOARD ASSY

CASING

#	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	Q'ty
#		03016812	FRONT PANEL		1
#		03124901	RACK MOUNT ANGLE 1U		2
#		03017034	TOP COVER		1

CHASSIS

#		03016856	CHASSIS		1
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KNOB, BUTTON

		22485150	F O-KNOB	248-150 M BLK	1
		22485188	M R-KNOB	248-188 MF BLK	1
		01340412	P R-KNOB	SF-A BLK/LCG	1
#		03124845	U R-KNOB	S1 BLK RED	4
#		03124834	U R-KNOB	S1 BLK BLU	1

SWITCH

Δ		02897801	SDDJE13200 94V-0	SEESAW SWITCH	1
#		03019201	SSSU11400	SLIDE SWITCH	3
#		03016956	SSSU121700	SLIDE SWITCH	1
#		03016912	SKQNALD010	TACT SWITCH	2

JACK, EXT TERMINAL

		00569278	LGR4609-7100	6.5MM JACK	5
		01343723	YKC21-3117 (ORANGE)	RCA(PIN) JACK	1
#		03017834	YKC21-4481 (ORANGE)	RCA JACK(PIN)	1
		01902801	COH2183-02	BNC CONNECTOR	1
		02781101	YKF45-0020	USB CONNECTOR	1
		00679767	NC3MAH	XLR CONNECTOR	2

POWER SUPPLY UNIT

Δ		02457745	A1DU2L3B104 VER.3	SWITCHING REGULATOR	1
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NOTE: Replacement A1DU2L3B104 VER.3 should be made on a unit base.

PCB ASSY

#		72128790	MAIN BOARD ASSY		1
			NOTE: 'MAIN BOARD ASSY' includes the following parts.		
#		03126489	WIRING	7x130-P2.5-XHP-SCN	1
#		03017045	JACK HOLDER		2
#		72128801	PANEL BOARD ASSY		1
			NOTE: 'PANEL BOARD ASSY' includes the following parts.		
		12169375	LED SPACER	LH-3-5	21
#		72128812	POWER BOARD ASSY		1
			NOTE: 'POWER BOARD ASSY' includes the following parts.		
		01347923	GROUNDING TERMINAL	MEP1866-A	1

IC

Δ		01786667	HD6413006F20	IC (CPU)	1
		02458978	XCB56364FU100	IC (DSP)	1
		*****	MBM29F400BC-90PFTN	IC (FLASH MEMORY/BLANK)	1
		02453878	AK4528VF	IC (AD/DA)	1
		02781323	TUSB3200ACPAH	IC (AD/DA)	1
		02781312	HN58X2464FPIZ	IC (EEPROM)	1
		02785112	M5M5256DFP-55LL-T4	IC (SRAM)	1
		02901612	M74HC4052MTCX	IC (COMS)	1

IC					
	01675034	TC74VHC138FT(EL)	IC (CMOS)	IC34 on MB	1
	01675023	TC74VHC139FT(EL)	IC (CMOS)	IC42 on MB	1
	01679023	TC74VHC157FT(EL)	IC (CMOS)	IC67 on MB	1
	01349590	TC7WU04FU(TE12L)	IC (CMOS)	IC53,IC57,IC60,IC68,IC48 on MB	5
	02129334	TC7WH08FU(TE12L)	IC (CMOS)	IC41 on MB	1
	02905445	TC7SET08FU(TE85L)	IC (CMOS)	IC54,IC64,IC69 on MB	3
	01348901	TC7SH04FU(TE85L)	IC (CMOS)	IC66,IC70 on MB	2
	15289105	UPC4570G2-E2	IC (BIPOLAR OP AMP)	IC33,IC31,IC30,IC29,IC28 on MB	5
	15289117	NJM5532MD-TE1	IC (OP AMP)	IC32 on MB	1
	01458445	UPC29M33T-T1	IC (REGULATOR)	IC63 on MB	1
	15199283	UPC78L05T-E1	IC (REGULATOR)	IC62 on MB	1
	02015678	LC89055W-RA8	IC (DIGITAL IN)	IC46,IC51,IC58,IC55 on MB	4
#	03015690	AK4103-VF-E2	IC (DIGITAL OUT)	IC49 on MB	1
	02565390	GP1FA501TZ TX	IC (OPTICAL CONNECTOR)	JK2 on MB	1
	02565401	GP1FA501RZ RX	IC (OPTICAL CONNECTOR)	JK3 on MB	1
	02893356	EPM3064ATC100-10	IC (PLD)	IC1 on MB	1
	00564690	TC9246F(ELP)	IC (PLL)	IC44 on MB	1
	02903034	S-80942CLMC	IC (RESET)	IC45 on MB	1
#	03015701	AD1895A	IC (SRC)	IC52,IC59,IC56,IC47 on MB	4
TRANSISTOR					
	01121278	2SA1576A T106 QRS	TRANSISTOR	Q14 on MB	1
	02454390	2SA1588-GR(TE85L)	TRANSISTOR	Q13 on MB	1
	15309604	2SB1197KR T-146	TRANSISTOR	Q3,Q7,Q6,Q4,Q2,Q1,Q5 on MB	7
	15319115	2SC4213-A(TE85L)	TRANSISTOR	Q10,Q12,Q19,Q18,Q11,Q9 on MB	6
	15329516	DTC114EKT146	TRANSISTOR	Q20,Q16,Q21,Q22,Q8 on MB	5
DIODE					
	02454412	CRG02 (TE85L)	RECTIFIER DIODE	D6 on MB	1
	02908890	FTZ6.8E T148	ZENER DIODE	D27 on MB	1
	02902278	L-934MBD	LED (BLUE)	D17 on PB	1
#	03019223	L-934CB/1GD (HOUSING)	LED (GREEN)	D2,D3,D4,D1 on MB	4
#	03019245	L-934CB/1ID (HOUSING)	LED (RED)	D5 on MB	1
	00785856	SLR-342VR3F	LED (RED)	D7,D8,D28 on PB	3
	02015623	SLR-342MG3F	LED (GREEN)	D25,D19,D15,D16,D18,D14,D21,D24,D22 on PB	9
#	03016901	SLR-342DU3F	LED (YELLOW)	D26,D23,D20,D13,D12,D11,D10,D9 on PB	8
RESISTOR					
	15399707	MCR25 JZH J 151	MTL.FILM RESISTOR	R89,R103,R102,R60,R61,R76,R77,R88 on MB	8
	01454890	MCR50 JZH J 220	MTL.FILM RESISTOR	R118,R108 on MB	2
	01011856	RPC05T 0R0 J	MTL.FILM RESISTOR	R190,R2,R174,R176,R178,R188 on MB. R148,R147,R149,R150,R151,R152 on PB	6 +6
	00566867	RPC05T 100 J	MTL.FILM RESISTOR	R167,R144 on MB	1
	00566923	RPC05T 270 J	MTL.FILM RESISTOR	R171,R172 on MB	2
	00566934	RPC05T 330 J	MTL.FILM RESISTOR	R18,R19,R137,R138,R139 on MB. R155,R154,R153,R146,R145,R179 on PB	11 +6
	00566967	RPC05T 470 J	MTL.FILM RESISTOR	R168,R33,R183,R170,R169 on MB	5
	00567001	RPC05T 750 J	MTL.FILM RESISTOR	R35,R45,R40,R39,R25,R23,R21,R49,R29,R55 on MB	10
	00567089	RPC05T 331 J	MTL.FILM RESISTOR	R143 on MB	1
	00567123	RPC05T 561 J	MTL.FILM RESISTOR	R189 on MB	1
	00567156	RPC05T 102 J	MTL.FILM RESISTOR	R7,R8,R141,R140,R9 on MB	5
	00567178	RPC05T 152 J	MTL.FILM RESISTOR	R175,R11,R162,R158 on MB	2
	00567190	RPC05T 222 J	MTL.FILM RESISTOR	R93,R62,R129,R127,R100,R69 on MB	6
	00567212	RPC05T 332 J	MTL.FILM RESISTOR	R173 on MB	1
	00567245	RPC05T 472 J	MTL.FILM RESISTOR	R180,R181 on MB	2
	01897878	RPC05T 512 J	MTL.FILM RESISTOR	R46,R57,R56,R47,R26,R27,R36,R37 on MB	8
	00567278	RPC05T 822 J	MTL.FILM RESISTOR	R24,R34,R44,R53 on MB	4
	00567289	RPC05T 103 J	MTL.FILM RESISTOR	R136,R16,R6,R4,R3,R194,R135,R54,R156,R193,R1 on MB	11
	00567378	RPC05T 473 J	MTL.FILM RESISTOR	R116,R20,R28,R38,R48 on MB	5
	00567412	RPC05T 104 J	MTL.FILM RESISTOR	R63,R126,R120,R111,R101,R96,R94,R80,R70,R134 on MB	10
	00567456	RPC05T 224 J	MTL.FILM RESISTOR	R10,R112 on MB	2
	00567478	RPC05T 334 J	MTL.FILM RESISTOR	R109 on MB	1
	00567556	RPC05T 105 J	MTL.FILM RESISTOR	R22 on MB	1
	15419704	RR1220P-101-D 100 OHM (CHIP)	MTL.FILM RESISTOR	R192,R191 on MB	2
	01018234	RR1220P-331-D 330 OHM (CHIP)	MTL.FILM RESISTOR	R157,R78,R161,R95 on MB	4
	00348767	RR1220P-471-D 470 OHM (CHIP)	MTL.FILM RESISTOR	R131,R124,R132,R123 on MB	4
	00564189	RR1220P-152-D 1.5KOHM (CHIP)	MTL.FILM RESISTOR		2
	00564212	RR1220P-332-D 3.3KOHM (CHIP)	MTL.FILM RESISTOR	R163,R159 on MB	2
	01679312	RR1220P-362-D 3.6K OHM (CHIP)	MTL.FILM RESISTOR	R79,R67,R98,R104 on MB	4
	00451523	RR1220P-392-D 3.9K OHM (CHIP)	MTL.FILM RESISTOR	R65,R86 on MB	2
	15419707	RR1220P-472-D 4.7K OHM (CHIP)	MTL.FILM RESISTOR	R164,R160 on MB	2
	01788856	RR1220P-912-D 9.2K OHM (CHIP)	MTL.FILM RESISTOR	R121,R125,R133,R128 on MB	4
	15419701	RR1220P-103-D 10K OHM (CHIP)	MTL.FILM RESISTOR	R68,R106,R58,R59,R66,R75,R83,R84,R87,R92,R82,R105,R130,R107,R114,R117,R122,R99 on MB	18
	15419725	RR1220P-223-D 22K OHM (CHIP)	MTL.FILM RESISTOR	R85,R64 on MB	2

RESISTOR					
#	00120278	RR1220P-513-D 51K OHM (CHIP)	MTL.FILM RESISTOR	R74,R91 on MB	2
	01013878	RR1220Q-100-D 10 OHM (CHIP)	MTL.FILM RESISTOR		1
	01010445	EXBV8V331JV	RESISTOR ARRAY	RA5,RA4 on MB	2
	15409113	EXBV8V103JV	RESISTOR ARRAY	RA3 on MB	1
	15399965	RCE9A103JAG7A (10K OHM x8)	RESISTOR ARRAY	RA1,RA2 on MB	2
POTENTIOMETER					
#	03017012	RK0972210C0N 10KBx2	9M/M ROTARY POT.	VR8 on MB	1
#	03230645	RK09K12A0D08	9M/M ROTARY POT.	VR7 on MB	1
#	03230634	RK09K1110D3G	9M/M ROTARY POT.	VR5,VR2,VR3,VR4,VR6 on MB	5
CAPACITOR					
	01675167	GRM39CH100D50PT	CERAMIC CAPACITOR	C42,C46,C198,C200,C24,C26 on MB	6
	01672412	GRM39CH150J50PT	CERAMIC CAPACITOR	C25 on MB	1
	01675190	GRM39CH220J50PT	CERAMIC CAPACITOR	C76,C109,C113,C130,C135,C72 on MB	6
	01675201	GRM39CH270J50PT	CERAMIC CAPACITOR	C219,C220 on MB	2
	01675212	GRM39CH330J50PT	CERAMIC CAPACITOR	C139,C217,C218,C149 on MB	4
	01675234	GRM39CH470J50PT	CERAMIC CAPACITOR	C170,C174 on MB	2
	01675278	GRM39CH101J50PT	CERAMIC CAPACITOR	C213 on MB	1
	00567823	GRM39B102K50PT	CERAMIC CAPACITOR	C214,C152,C141,C216 on MB	4
	00567945	GRM39B103K50PT	CERAMIC CAPACITOR	C89,C19,C29,C55,C57,C71,C88,C103,C104,C73 on MB	10
#	01235278	GRM188B11C473KA01D	CERAMIC CAPACITOR	C58 on MB	1
	00567978	GRM39F104Z25PT	CERAMIC CAPACITOR	C158,C190,C153,C176,C177,C178,C179,C180,C181,C185,C167,C188,C165,C193,C195,C22,C221,C212,C211,C209,C207,C206,C205,C187,C99,C79,C80,C84,C86,C87,C90,C91,C93,C175,C95,C78,C102,C197,C106,C143,C145,C146,C150,C155,C101,C161,C162,C94,C35,C51,C50,C48,C8,C43,C33,C40,C39,C52,C36,C45,C11,C12,C13,C14,C34,C16,C17,C105,C23,C32,C37,C5,C1,C2,C41,C4,C54,C6,C75,C74,C70,C69,C56,C67,C63,C62,C20,C7,C61,C59 on MB	91
	02568812	ECJ2FB1C474K	CERAMIC CAPACITOR	C30 on MB	1
	02562478	ECEA1HPZ101B	CHEMICAL CAPACITOR	C108,C182,C183,C184,C199,C201 on MB	6
	02453856	ECEA0JPZ221B	CHEMICAL CAPACITOR	C191 on MB	1
	01900823	RA2-16V100M-T2	CHEMICAL CAPACITOR	C128,C115 on MB	2
	02898145	RA2-6V470MC-T2	CHEMICAL CAPACITOR	C196,C194 on MB	2
	01900834	RA2-16V101M-T2	CHEMICAL CAPACITOR	C168,C172,C166,C164,C156,C154 on MB	6
	01902590	RA2-6V101MC-T2	CHEMICAL CAPACITOR	C66,C3,C9,C21,C38,C47,C49,C68,C60,C22,C116,C129,C100,C98,C92,C85,C83,C77,C53,C44 on MB	20
	01902601	RA2-6V221M-T2	CHEMICAL CAPACITOR	C31 on MB	1
	02014890	RA2-16V221MT2	CHEMICAL CAPACITOR	C148 on MB	1
	01902612	RA2-6V471MC-T2	CHEMICAL CAPACITOR	C160,C163,C147 on MB	3
	01909690	RA2-16V471MC-T2	CHEMICAL CAPACITOR	C140 on MB	1
	02898112	RA2-6V102MC-T2	CHEMICAL CAPACITOR	C159 on MB	1
	02782901	RE3-50V010MB-T2	CHEMICAL CAPACITOR	C142 on MB	1
#	03126623	RFS-16V471MI6-T4	CHEMICAL CAPACITOR	C144,C151 on MB	2
	01898434	ECHU1H101JX5	POLYEST. CAPACITOR	C126,C125,C107,C124,C111,C110 on MB	6
	01899345	ECHU1H121JX5	POLYEST. CAPACITOR	C112,C123,C138,C134 on MB	4
	02126423	ECHU1H331JX5	POLYEST. CAPACITOR	C171,C157 on MB	2
	01784145	ECHU1H152JX5	POLYEST. CAPACITOR	C122,C132 on MB	2
	01896589	SK4-0J106MZ4-RA	TANTALUM CAPACITOR	C189,C192,C204,C208,C210,C186 on MB	6
INDUCTOR, COIL, FILTER					
#	03128223	SFT-36SN	FERRITE-CORE		1
	01783601	BLM21B601SPT	FERRITE-BEAD	L5,L1,L3,L4 on MB	4
CRYSTAL, RESONATOR					
#	03017301	MA-406 6.000MHZ TE24	CRYSTAL	X3 on MB	1
	00894023	MA-406 20.000MHZ TE24	CRYSTAL	X1 on MB	1
	00901912	MA-406 24.576MHZ TE24	CRYSTAL	X2 on MB	1
CONNECTOR					
	02011912	14FMN-BTK	CONNECTOR	CN7 on MB	1
	02235467	14FMN-STK	CONNECTOR	CN8 on PB	1
	02237512	75501-0X0-B	CONNECTOR P/N	CN1 on MB	1
	13369567	B4B-PH-K-S JST (4P)	CONNECTOR	CN3 on MB	1
	13369592	B7B-XH-A(7P) JST	CONNECTOR	CN9 on MB. CN2 on PW	1
	13369898	B2P3-VH 7A /250V	CONNECTOR	CN3 on PW	1
	13369568	JST B3B-PH-K-S JST	CONNECTOR	CN4 on MB	1

WIRING, CABLE

△	#	03126478	WIRING AC ASSY		1
	#	03016845	BNCD-P=1.00-K-14-120	BAN CARD	1

TRANSFORMER

		02019478	(7KQ5) 19832A	PULSE TRANS	T1 on MB	1
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SCREW

		40011056	SCREW 3x6	BINDING TAPTITE B ZC	12
		40012534	SCREW 3x6	BINDING TAPTITE S FE BZC	1
		40011101	SCREW 3x8	BINDING TAPTITE B BZC	14
		40455167	SCREW 3x8	OVAL HEAD TAPTITE B NI	8
	#	40560467	SCREW 4x8	TURSS HEAD TAPTITE S NI	6
		40342989	SCREW M4x8	PAN W/EX.TOOTH WASHER	1

PACKING

	#	03128501	PACKING CASE		1
	#	03121723	PAD		2
	#	03128512	PAD ACCESSORY PAD		1
	#	03129945	OUTER PACKING CASE		1

MISCELLANEOUS

		40126812	CAUTION LABEL	BARRIER(100V/117V ONLY)	1
		00564612	FOOT	C4305+N#500	4
△	#	03121967	INSULATING SHEET		1

ACCESSORIES (STANDARD)

	#	72128756	OWNER'S MANUAL SET	JAPANESE	1
	#	72129567	OWNER'S MANUAL SET	ENGLISH	1
	#	40560767	LEAFLET NOTES	JAPANESE/ENGLISH	1
△		02670401	AC CORD SET 100V	YA-101/YP-3N/YC-13	1
△		00894378	AC CORD SET 120V	SP301+IS14 SJT18/3	1
△		00894389	AC CORD SET 230V	SP22+IS14 H05VV-F3G1.0	1
△		00907001	AC CORD SET 240VE	KP-610 GTTBS-3 KS-31A	1
△		23495124	AC CORD SET 240VA	SC-144-JO1 ES303-10HMA	1
	#	03128234	CD-ROM	DRIVER (Windows/Macintosh)	1
		02239578	USB CONNECT CORD	YAF11-0791 2M	1
		40232334	WARRANTY CARD	(JAPAN ONLY)	1

CHECKING THE VERSION NUMBER

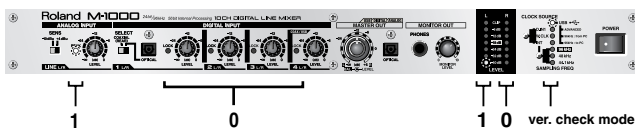
MEMO

This can also be checked in Test mode.

1. Set the [SELECT] switch to "OPTICAL," hold down the [FREQ] and [CLOCK] switches, and turn on the power. The "DIN1" LED lights up.
2. The version number is indicated in the LED in binary notation.

ANALOG PEAK Integer
 DLOCK 1--4 First decimal place
 LEVEL L -40---18 Second decimal place
 LEVEL R -40---18 Third decimal place

Example: Ver.1.010



RESTORING THE FACTORY SETTINGS

MEMO

These settings can also be made in Test mode.

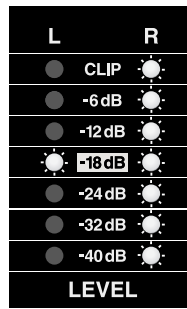
The following procedure can be used to return the settings to their original factory condition.

1. Set the [SELECT] switch, which switches the digital input, to accept "OPTICAL" input.
2. Hold down the [CLOCK SOURCE] switch, which switches the clock source, and turn on the power to the unit.

TEST MODE

Instructions for Entering Test Mode

1. Set the [SELECT] switch, which switches the digital input, to accept "COAXIAL" input.
2. Hold down the [CLOCK] and [FREQ] switches, and turn on the power to unit.
3. A "T" figure, rotated 90 degrees clockwise, appears in the "LEVEL METER," indicating that the unit has entered Test mode.



4. Press the [CLOCK] switch to proceed to the version number display.

Displaying the Version Number

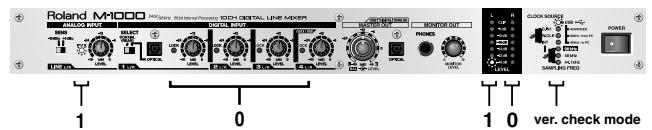
1. The "USB" LED lights up.



2. The version number is indicated in the LED in binary notation.

ANALOG PEAK Integer
 DLOCK 1--4 First decimal place
 LEVEL L -40---18 Second decimal place
 LEVEL R -40---18 Third decimal place

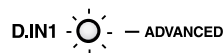
Example: Ver.1.010



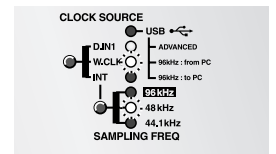
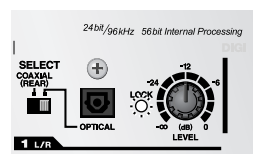
3. Press the [CLOCK] switch to proceed to the switch check.

Switch Check

1. The "DIN1" LED lights up.



SELECT: The "Din1 Lock" LED for COAX lights up.
 CLOCK: The "WORDCLOCK" LED remains lit while this is pressed.
 FREQ: The "48kHz" LED remains lit while this is pressed.

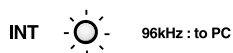


ON ↔ OFF

2. When the checks for the [CLOCK] and [FREQ] switches are completed, proceed to the volume check.

Volume Check

1. The "INT" LED lights up.



2. As each volume control is rotated, the LEDs for the corresponding values of "LEVEL R -40dB" through "CLIP" light up.

LEVEL L -40dB--CLIP:Indicates the values for the displayed volume.

- o CLIP: MASTER BALANCE
- o -6dB: MASTER LEVEL
- o -12dB: DIN4 LEVEL
- o -18dB: DIN3 LEVEL
- o -24dB: DIN2 LEVEL
- o -32dB: DIN1 LEVEL
- o -40dB: AIN LEVEL

LEVEL R -40dB--CLIP:Indicates the values for the volume.

- CLIP o: MAXIMUM(127)
- 6dB o: 100-126
- 12dB o: 80-99
- 18dB o: 60-79
- 24dB o: 40-59
- 32dB o: 20-39
- 40dB o: 1-19
- : MINIMUM(0)

CLOCK: When the volume check is completed, the test proceeds to the LED check.

Example: When adjusting DIN1

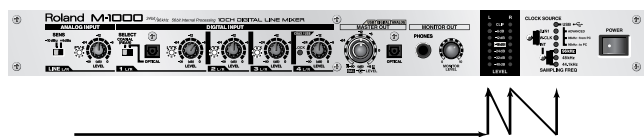


LED Check

CLOCK switch: LEDs light up one at a time, switching each time this is pressed. When all of the LEDs have been lit, the unit returns to the initial status of the LED check.

FREQ Switch: Ends the LED check and switches to Factory Reset.

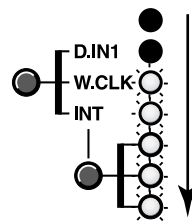
LEDs light in the sequence indicated by the arrows.



Factory Reset

After all of the "CLOCK SOURCE" and "SAMPLING FREQ" LEDs are lit, they go off in sequence, starting from the top.

CLOCK SOURCE



SAMPLING FREQ

After all LEDs go off, the "INTERNAL" LED lights up, and the procedure is finished.



Word Clock Output Check

1. Connect the M-1000's WORD CLOCK OUT connector to the WORD CLOCK IN connector of a VS-2480 or other device with a WORD CLOCK IN connector compatible with 96-kHz signals.
2. Press the M-1000's [CLOCK SOURCE] switch to set this to "INT."
3. Press the M-1000's [SAMPLING FREQ] switch to set the sampling frequency to "96kHz."
4. Confirm that the connected is locked in (if using the VS-2480, select "WORD CLOCK" in UTILITY-PROJECT-DIGITAL I/O).
5. Press the [SAMPLING FREQ] switch to confirm that this changes the setting to "48kHz" and "44.1kHz."

Word Clock Input Check

1. Connect the M-1000's WORD CLOCK IN connector to the WORD CLOCK OUT connector of an ADA-7000 or other device with a WORD CLOCK OUT connector.
2. Press the M-1000's [CLOCK SOURCE] switch to set this to "W.CLK."
3. Confirm that the [SAMPLING FREQ] LED that lights up corresponds to the input sampling frequency.

Audio Input/Output Check

M-1000 Measurement Conditions

- Clock: INT 96 kHz
- INPUT LEVEL: 0 dB
- MASTER LEVEL: 0 dB
- MONITOR LEVEL: Center

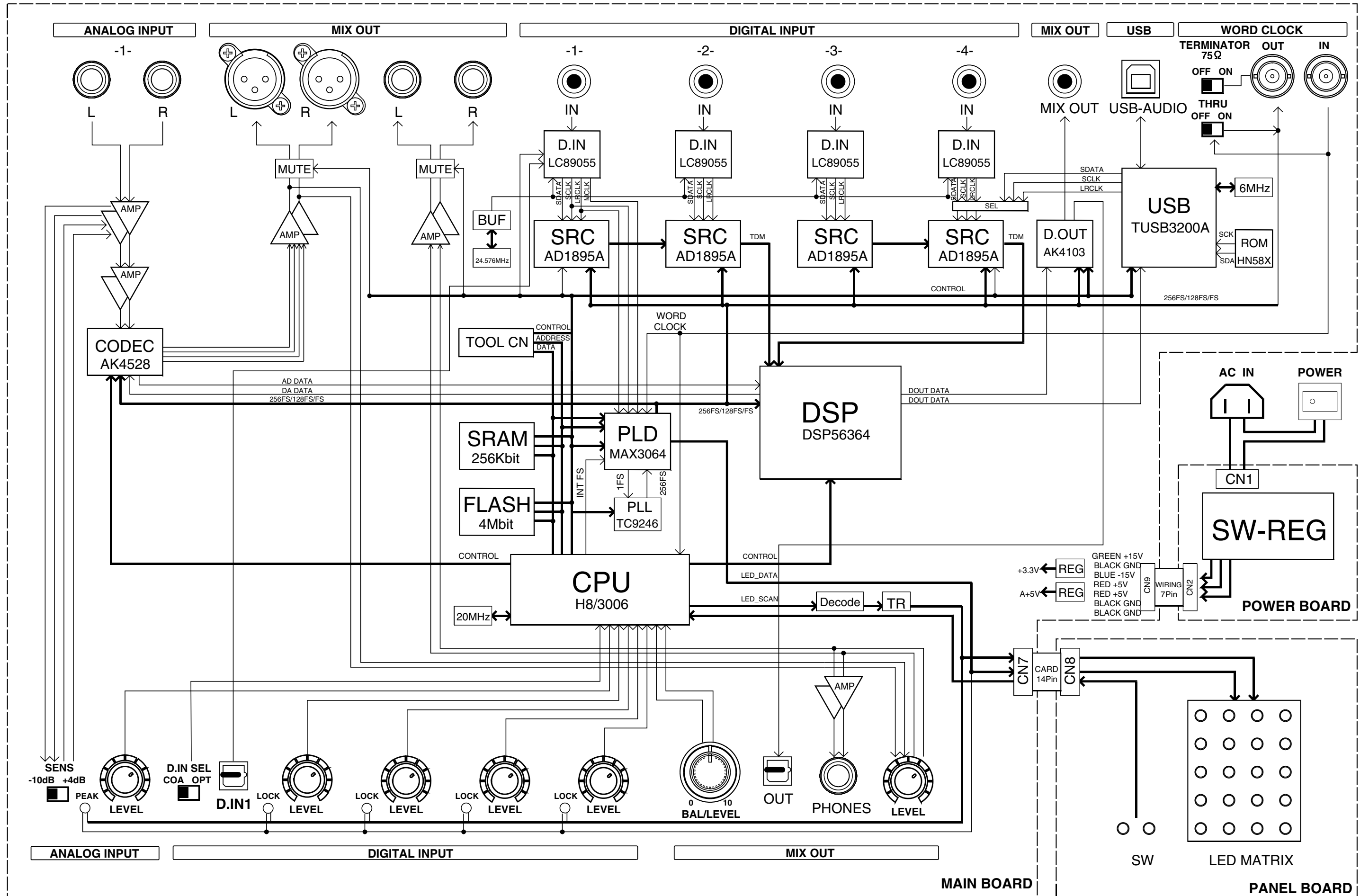
1. Input a 1-kHz sine wave at +4 dBu from an oscillator to the M-1000's ANALOG INPUT L/R connector.
2. Connect a pair of headphones to the M-1000's PHONES jack and listen to the sound to confirm that there is no distortion or noise in the sine wave.
3. Connect an oscilloscope to each of the M-1000's output connectors (XLR and PHONE JACK) to confirm that there is no distortion or noise in the waveform of the sine wave.
4. Connect the digital output connector of a CD player or other similar digital device to the M-1000's DIGITAL INPUT 1--4 connectors, then play back a CD containing a recording of a sine wave (for example, Track 1 on the CD included with the A-6).
5. Connect a pair of headphones to the M-1000's PHONES jack and listen to the sound to confirm that there is no distortion or noise in the sine wave.
6. Connect an oscilloscope to each of the M-1000's output connectors (XLR and PHONE JACK) to confirm that there is no distortion or noise in the waveform of the sine wave.

USB Check

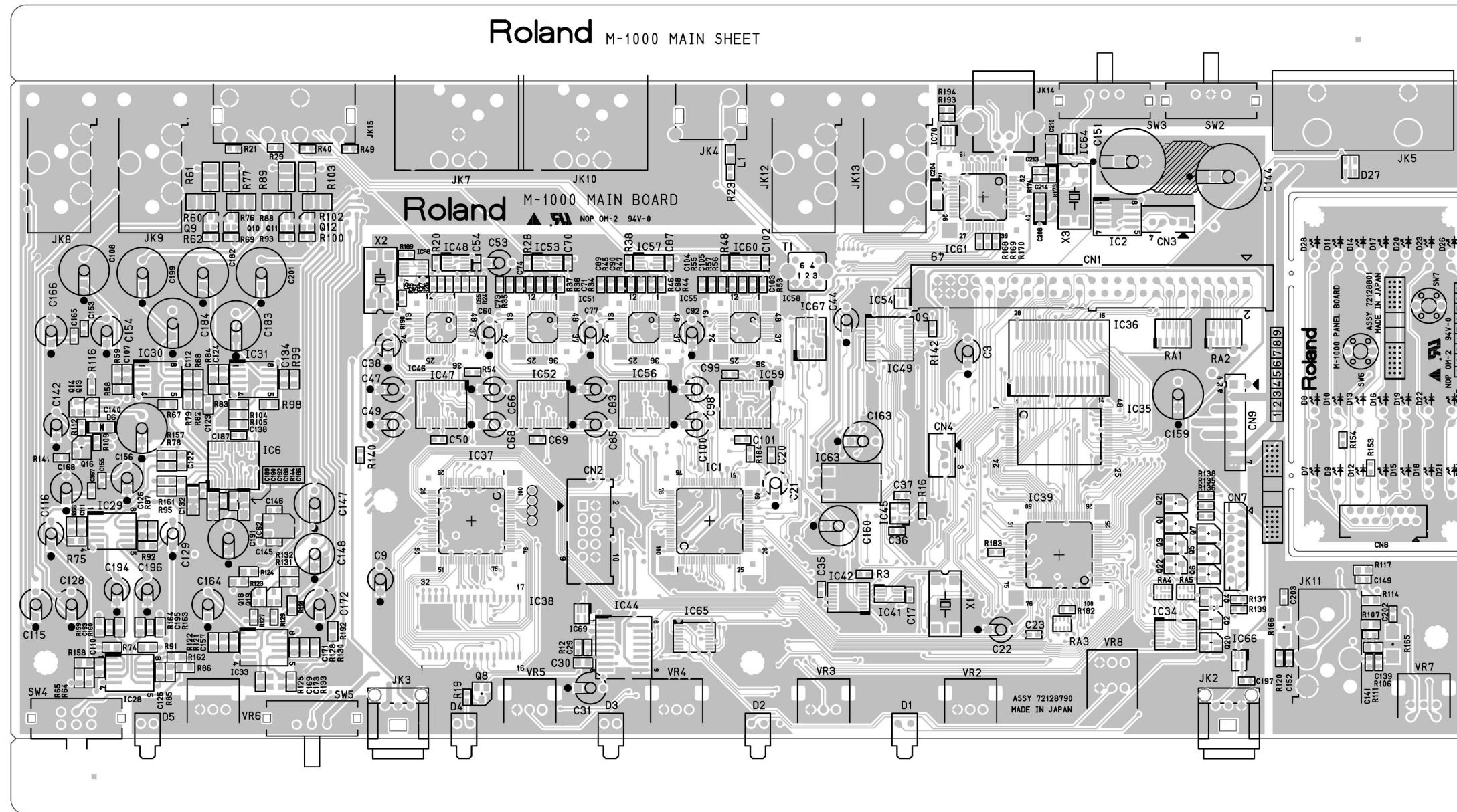
Set up a computer with the M-1000's USB driver installed and the audio settings properly made (refer to the M-1000 Owner's Manual).

1. Carry out Factory Reset on the M-1000, then turn off the M-1000's power.
2. Connect the M-1000 and the computer with a USB cable.
3. Start up the PC, then turn on the power to the M-1000.
4. Confirm that the M-1000's "USB" and "44.1kHz" LEDs are lit.
5. Set the LEVEL for DIGITAL INPUT 4 to "0 dB"; also set the MASTER LEVEL to "0 dB."
6. Use Media Player or another application to play back the audio file, and check the sound from the M-1000 through a pair of headphones. (If the sounds being played back are not audible, it may be that the audio settings are incorrect. Refer to the Read Me file on the M-1000 DRIVER CD-ROM to confirm the computer settings.)
7. Connect the digital output connector of a CD player or other similar digital device to the M-1000's DIGITAL INPUT 1 connector, then play back a CD containing a recording of a sine wave (for example, Track 1 on the CD included with the A-6).
8. Set the LEVEL for DIGITAL INPUT 1 to "0 dB"; also set the MASTER LEVEL to "0 dB."
9. Make a recording using Audio Recorder or other recording software, and confirm that the sounds are being recorded correctly. (If the sounds are not being recorded, it may be that the audio settings are incorrect. Refer to the Read Me file on the M-1000 DRIVER CD-ROM to confirm the computer settings.)

BLOCK DIAGRAM

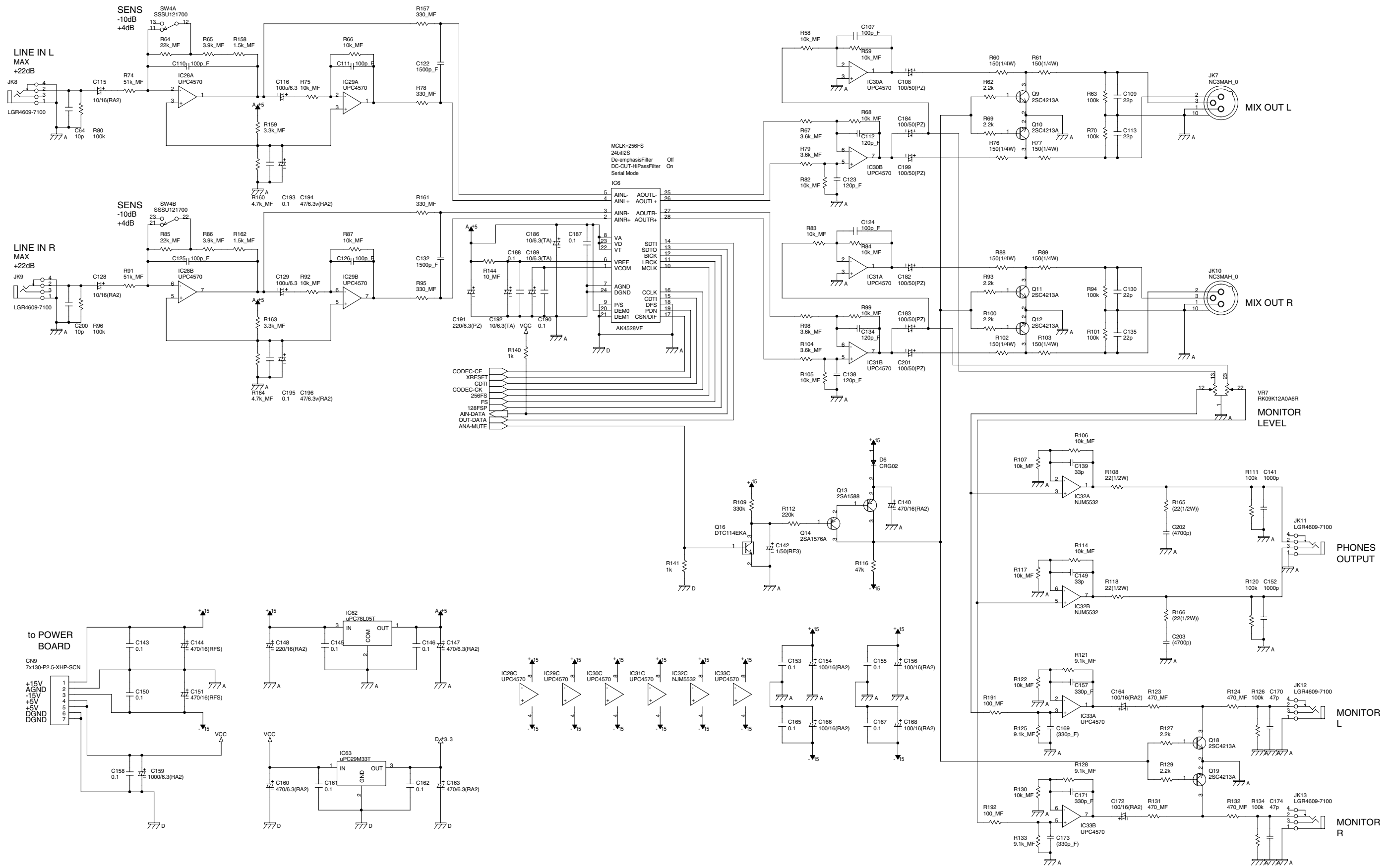


CIRCUIT BOARD (MAIN/PANEL/POWER)



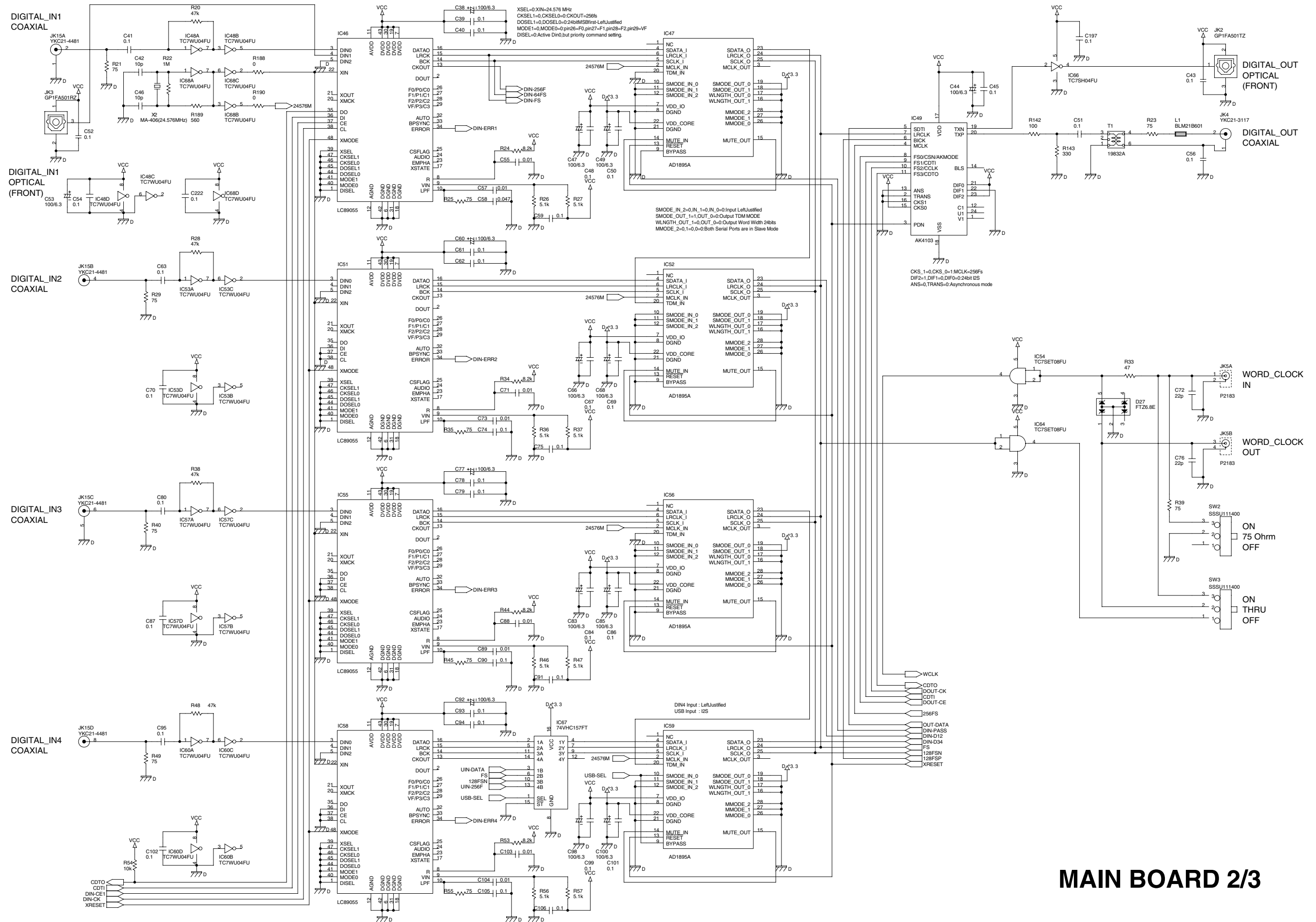
View from components side

CIRCUIT DIAGRAM (MAIN 1/3)



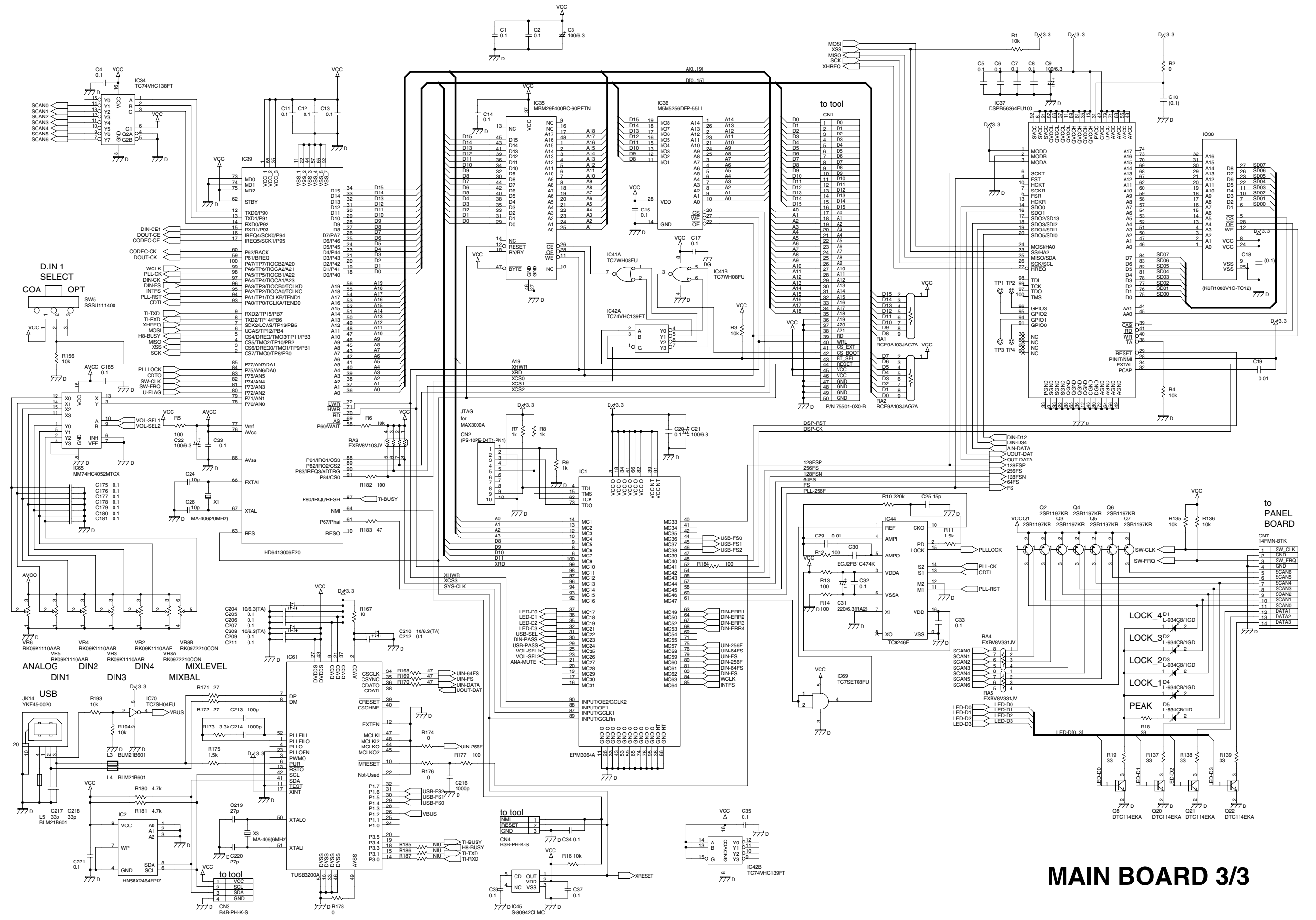
MAIN BOARD 1/3

CIRCUIT DIAGRAM (MAIN 2/3)



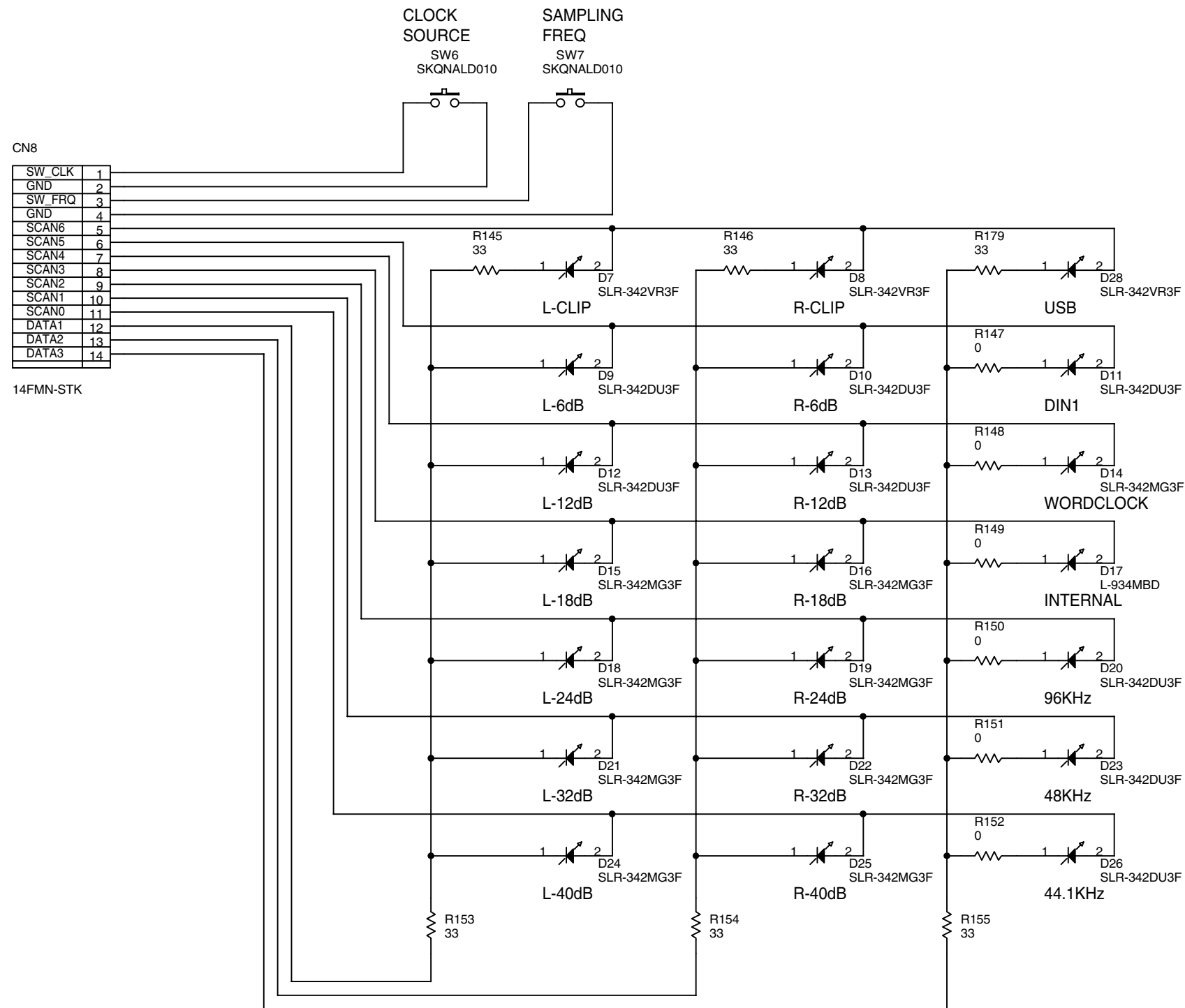
MAIN BOARD 2/3

CIRCUIT DIAGRAM (MAIN 3/3)



MAIN BOARD 3/3

CIRCUIT DIAGRAM (PANEL/POWER)



PANEL BOARD

