Service Manual

TRITON-Rack

Provisional Version

CONTENTS

1) Structural Diagram ----- Not yet
2) Block Diagram --------- 2
3) Circuit Diagram -------- 3
4) Diagnostics ---------- 9
5) Parts List ---------- 10

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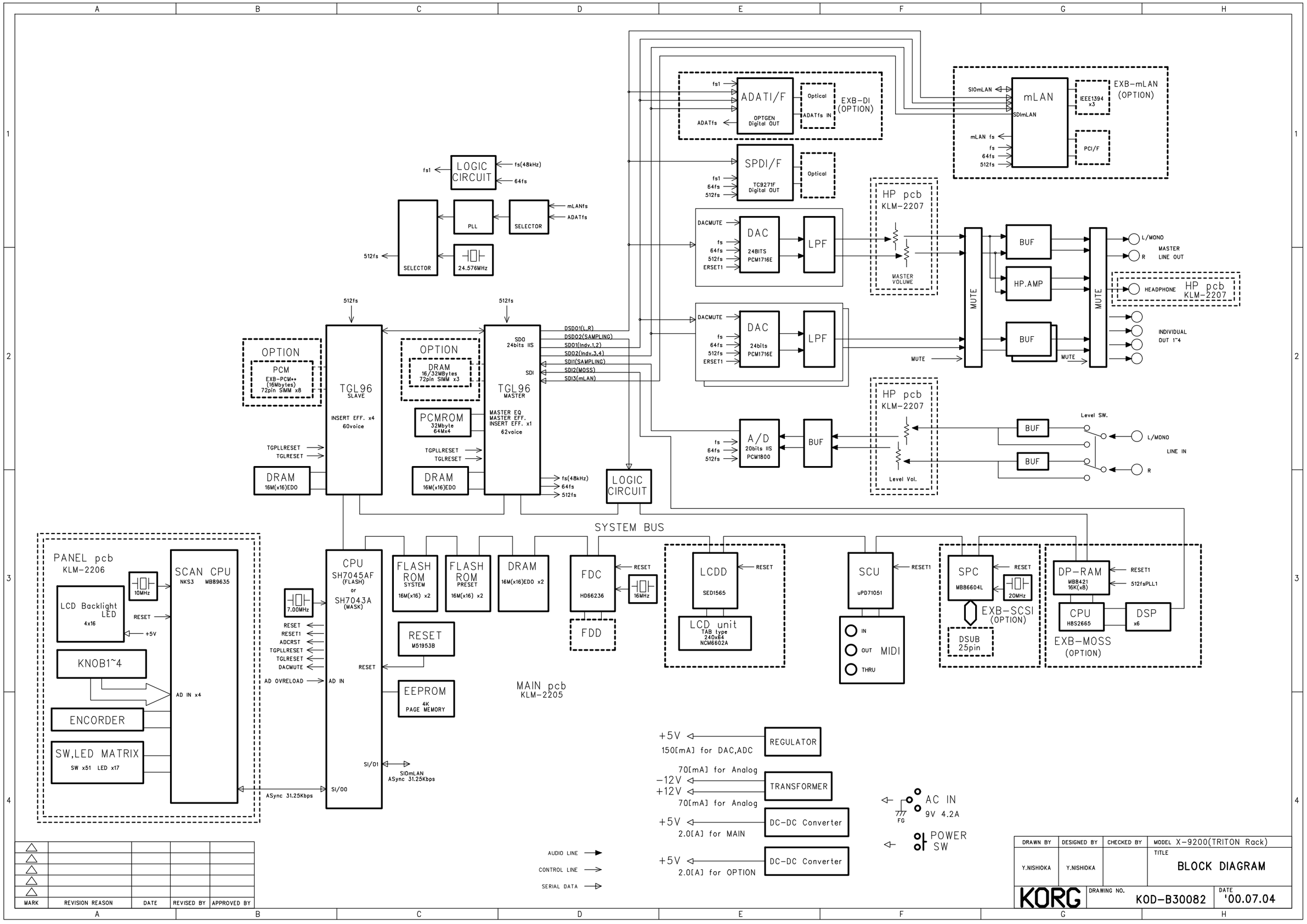

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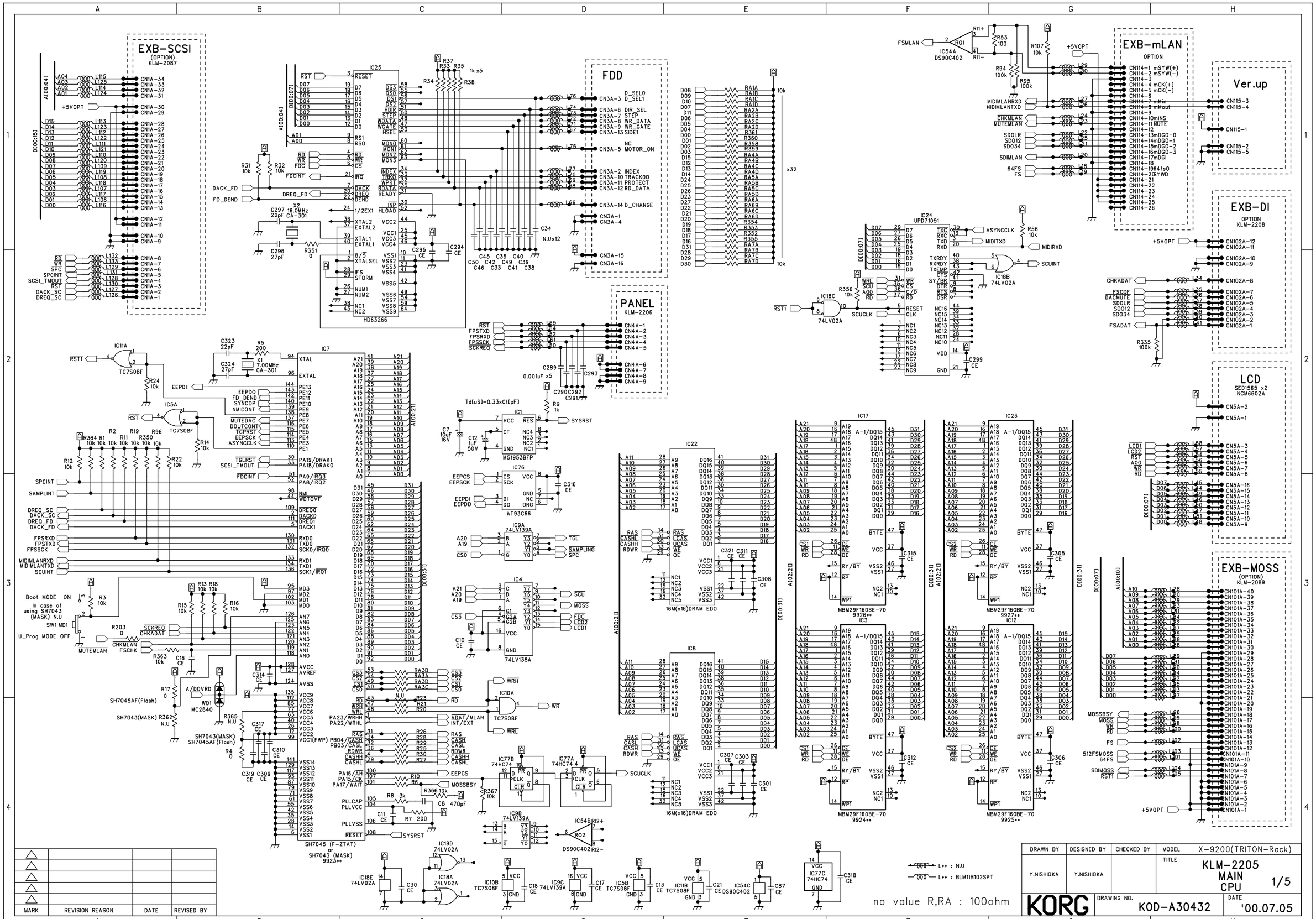
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL X-9200(TRITON Rack)
Y.NISHIOKA	Y.NISHIOKA		TITLE BLOCK DIAGRAM

KORG

DRAWING NO. KOD-B30082

DATE '00.07.04



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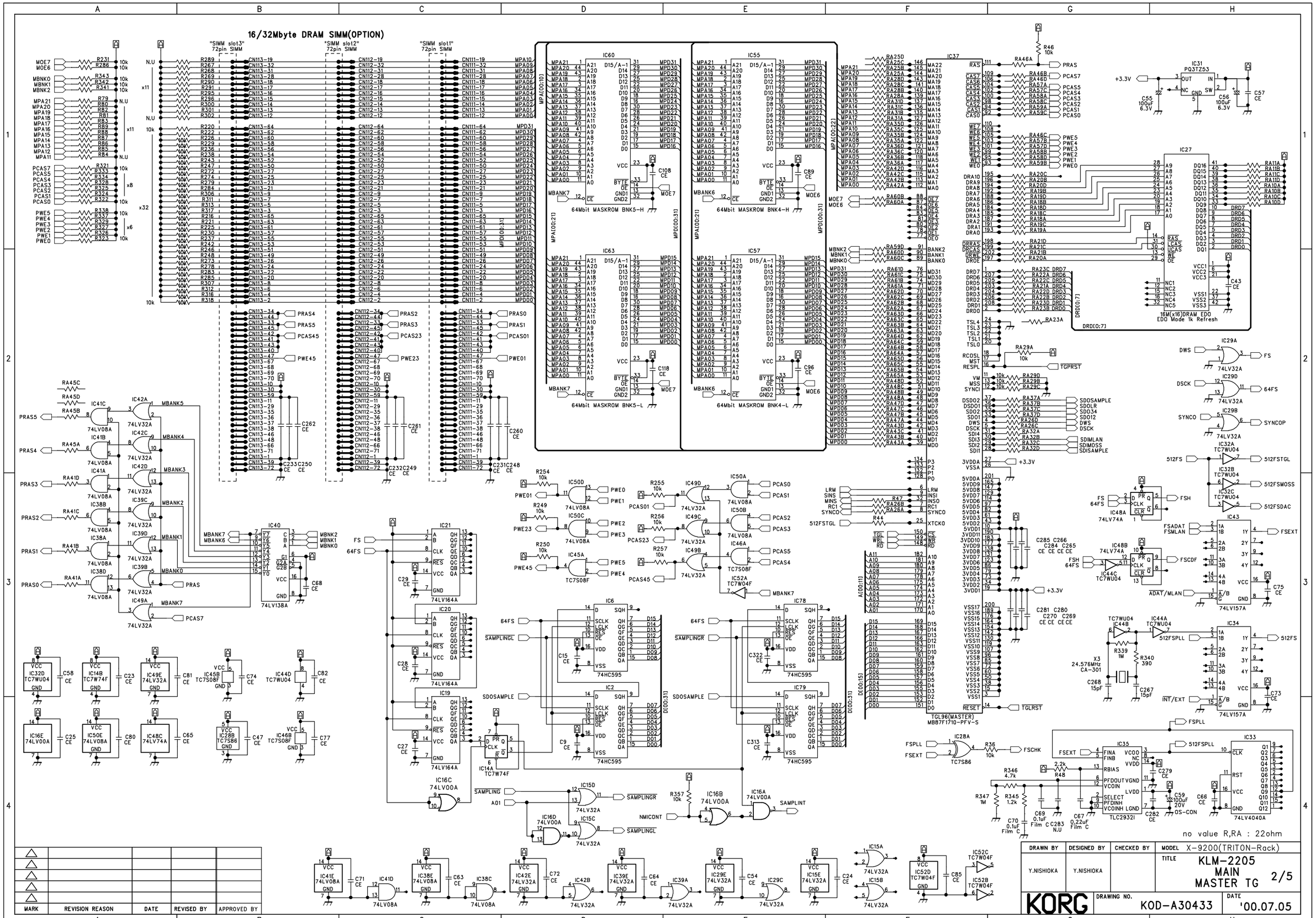
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL	X-9200(TRITON-Rack)
Y.NISHIOKA	Y.NISHIOKA		TITLE	KLM-2205 MAIN CPU 1/5
KORG	DRAWING NO.	KOD-A30432	DATE	'00.07.05



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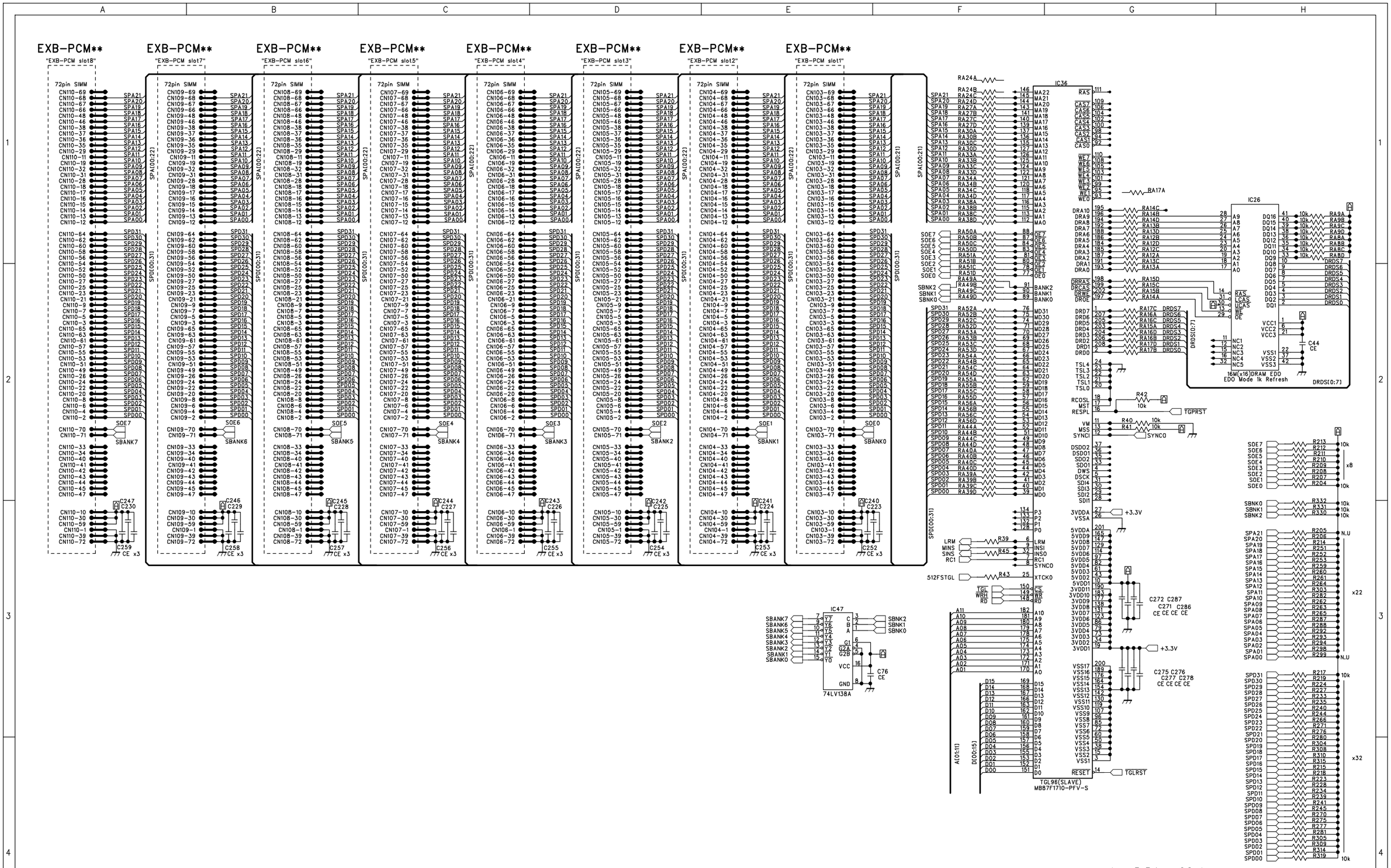
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL	X-9200(TRITON-Rack)
Y.NISHIOKA	Y.NISHIOKA		TITLE	KLM-2205 MAIN MASTER TG 2/5
KORG	DRAWING NO.	KOD-A30433	DATE	'00.07.05



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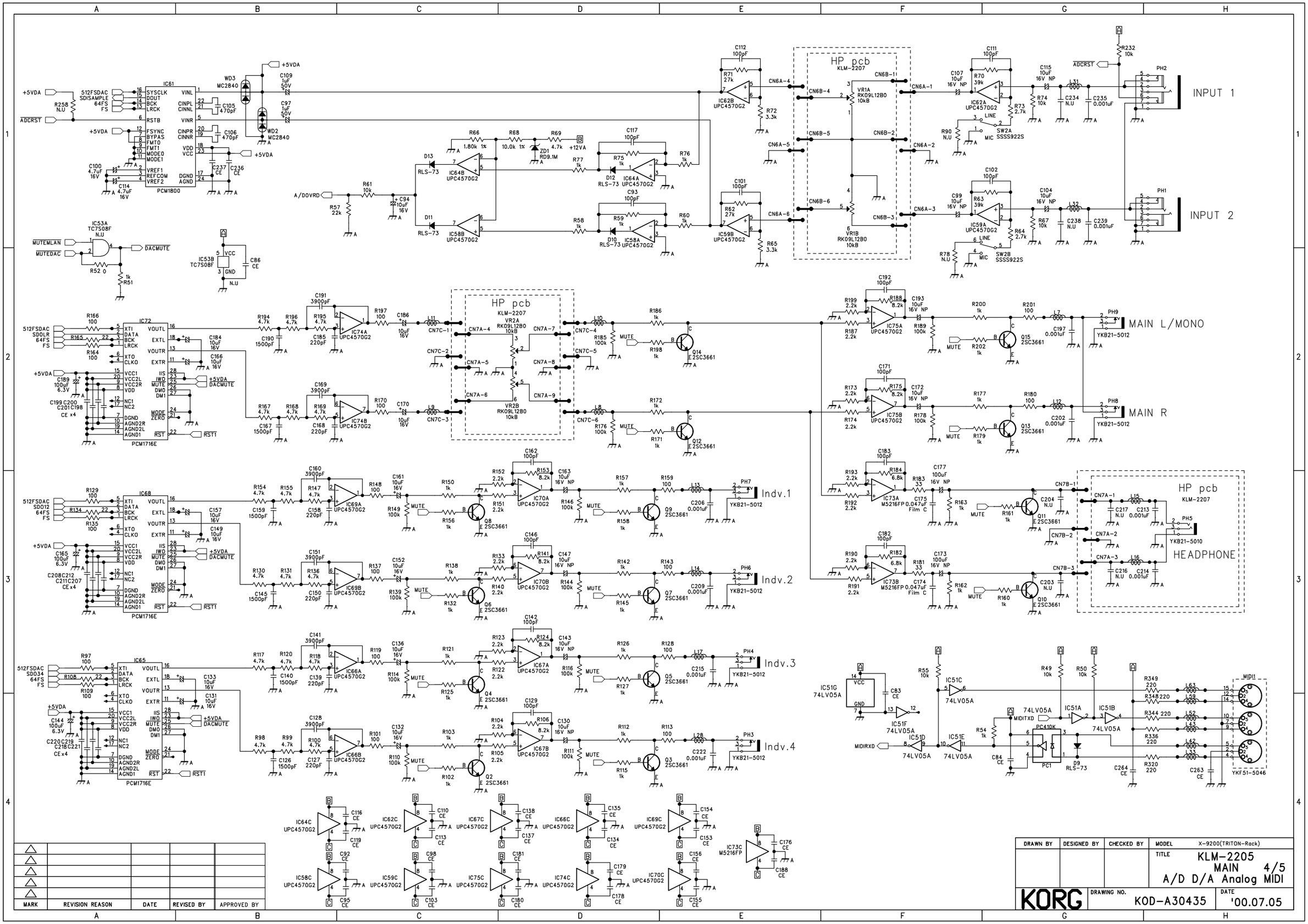
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL X-9200(TRITON-Rack)
Y.NISHIOKA	Y.NISHIOKA		TITLE KLM-2205 MAIN SLAVE TG 3/5
KORG	DRAWING NO. KOD-A30434		DATE '00.07.05



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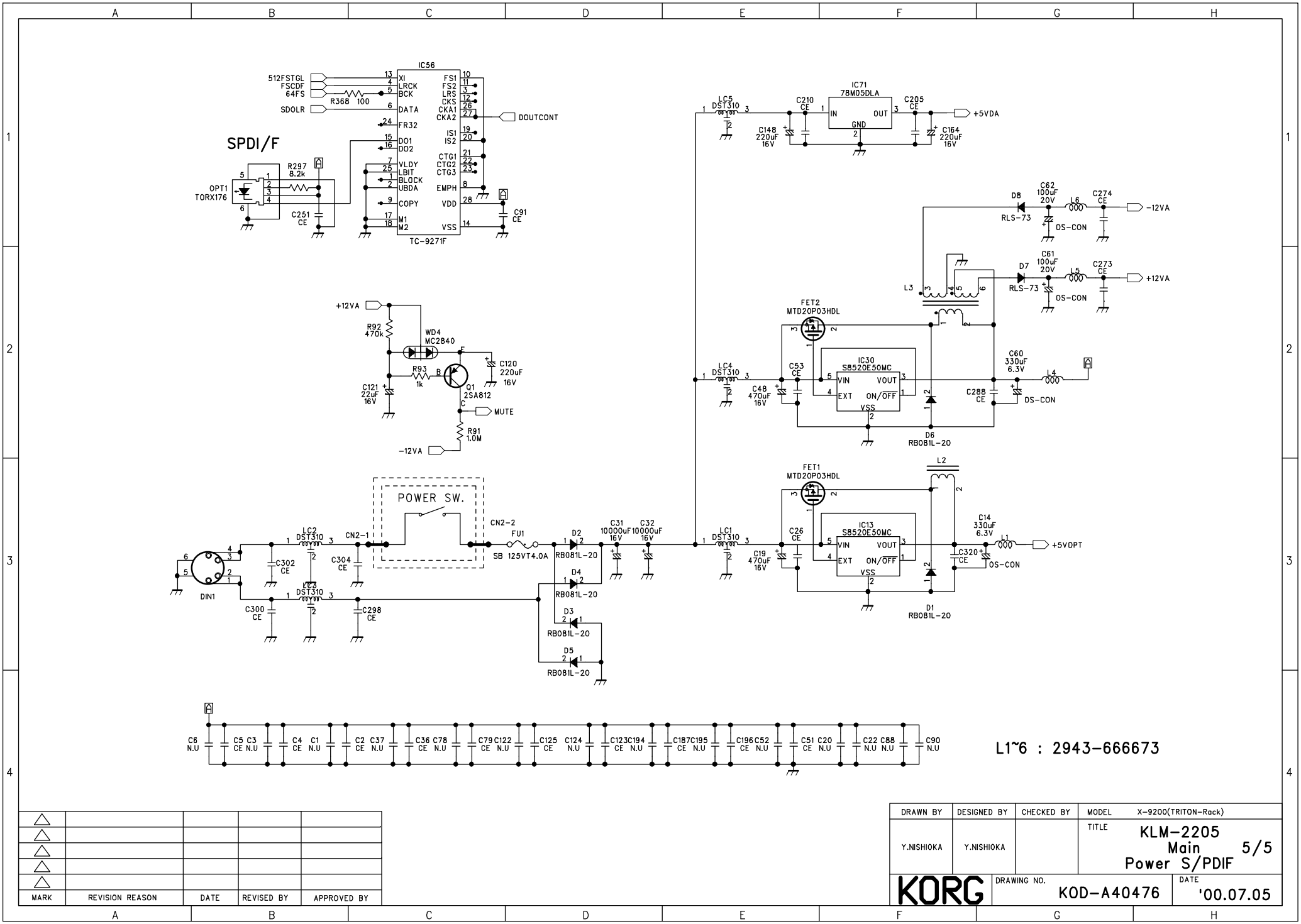
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL	X-9200(TRITON-Rack)
			TITLE	KLM-2205 MAIN 4/5 A/D D/A Analog MIDI
KORG			DRAWING NO.	KOD-A30435
			DATE	'00.07.05



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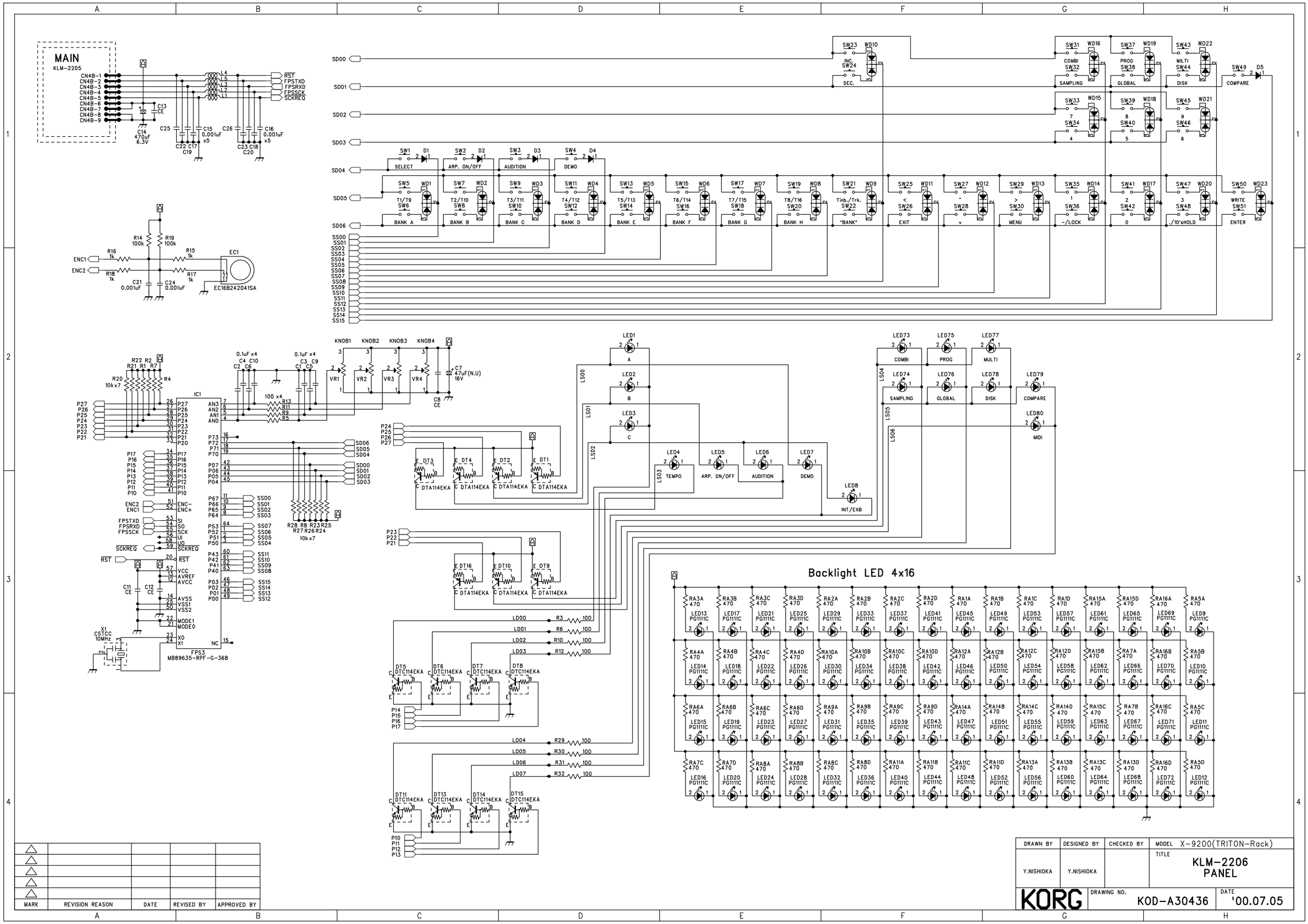
DRAWN BY	DESIGNED BY	CHECKED BY	MODEL X-9200(TRITON-Rack)
Y.NISHIOKA	Y.NISHIOKA		TITLE KLM-2205 Main Power S/PDIF 5/5
KORG	DRAWING NO. KOD-A40476		DATE '00.07.05


MAIN
KLM-2205
CN4B-1
CN4B-2
CN4B-3
CN4B-4
CN4B-5
CN4B-6
CN4B-7
CN4B-8
CN4B-9
RST
FPSTXD
FPSRXD
FPSSCK
SCKREQ
C13 CE
C14 470uF 6.3V
C25
C15 0.001uF x5
C26
C16 0.001uF x5
C22 C17 C19
C23 C18 C20
SD00
SD01
SD02
SD03
SD04
SD05
SD06
SS00
SS01
SS02
SS03
SS04
SS05
SS06
SS07
SS08
SS09
SS10
SS11
SS12
SS13
SS14
SS15
SW1 D1 SELECT
SW2 D2 ARP. ON/OFF
SW3 D3 AUDITION
SW4 D4 DEMO
SW5 WD1 T1/T9 SW6 BANK A
SW7 WD2 T2/T10 SW8 BANK B
SW9 WD3 T3/T11 SW10 BANK C
SW11 WD4 T4/T12 SW12 BANK D
SW13 WD5 T5/T13 SW14 BANK E
SW15 WD6 T6/T14 SW16 BANK F
SW17 WD7 T7/T15 SW18 BANK G
SW19 WD8 T8/T16 SW20 BANK H
SW21 WD9 Tinb./Tr'k. SW22 "BANK"
SW23 WD10 INC. SW24 DEC.
SW25 WD11 < SW26 EXIT
SW27 WD12 ^ SW28 v
SW29 WD13 > SW30 MENU
SW31 WD16 COMBI SW32 SAMPLING
SW33 WD15 7 SW34 4
SW35 WD14 1 SW36 -/LOCK
SW37 WD19 PROG SW38 GLOBAL
SW39 WD18 8 SW40 5
SW41 WD17 2 SW42 0
SW43 WD22 MILTI SW44 DISK
SW45 WD21 9 SW46 6
SW47 WD20 3 SW48 ./10'sHOLD
SW49 D5 COMPARE
SW50 WD23 WRITE SW51 ENTER
R14 100k
R19 100k
R16 1k
R15 1k
R18 1k
R17 1k
C21 0.001uF
C24 0.001uF
ENC1
ENC2
EC1
EC16B242041SA
KNOB1
KNOB2
KNOB3
KNOB4
VR1
VR2
VR3
VR4
C7 47uF(N.U) 16V
C8 CE
0.1uF x4 C4 C10 C2 C6
0.1uF x4 C3 C5 C1 C9
R22 R2 R21 R1 R7 R4
R20 10k x7
100 x4 R13 R11 R9 R5
IC1
FPS3
MB89635-RPF-G-368
X1 CSTCC 10MHz
C11 CE
C12 CE
R28 R8 R23 R25 R27 R26 R24
10k x7
LED1 A
LED2 B
LED3 C
LED4 TEMPO
LED5 ARP. ON/OFF
LED6 AUDITION
LED7 DEMO
LED8 INT/EXB
LED73 COMBI
LED75 PROG
LED77 MULTI
LED74 SAMPLING
LED76 GLOBAL
LED78 DISK
LED79 COMPARE
LED80 MIDI
LS00
LS01
LS02
LS03
LS04
LS05
LS06
E_DT3
E_DT4
E_DT2
E_DT1
DTA114EKA
E_DT16
E_DT10
E_DT9
LD00 R3 100
LD01 R6 100
LD02 R10 100
LD03 R12 100
DT5 DTC114EKA
DT6 DTC114EKA
DT7 DTC114EKA
DT8 DTC114EKA
LD04 R29 100
LD05 R30 100
LD06 R31 100
LD07 R32 100
DT11 DTC114EKA
DT13 DTC114EKA
DT14 DTC114EKA
DT15 DTC114EKA
Backlight LED 4x16
RA3A 470 LED13 PG1111C
RA3B 470 LED17 PG1111C
RA3C 470 LED21 PG1111C
RA3D 470 LED25 PG1111C
RA2A 470 LED29 PG1111C
RA2B 470 LED33 PG1111C
RA2C 470 LED37 PG1111C
RA2D 470 LED41 PG1111C
RA1A 470 LED45 PG1111C
RA1B 470 LED49 PG1111C
RA1C 470 LED53 PG1111C
RA1D 470 LED57 PG1111C
RA15A 470 LED61 PG1111C
RA15D 470 LED65 PG1111C
RA16A 470 LED69 PG1111C
RA5A 470 LED9 PG1111C
RA4A 470 LED14 PG1111C
RA4B 470 LED18 PG1111C
RA4C 470 LED22 PG1111C
RA4D 470 LED26 PG1111C
RA10A 470 LED30 PG1111C
RA10B 470 LED34 PG1111C
RA10C 470 LED38 PG1111C
RA10D 470 LED42 PG1111C
RA12A 470 LED46 PG1111C
RA12B 470 LED50 PG1111C
RA12C 470 LED54 PG1111C
RA12D 470 LED58 PG1111C
RA15B 470 LED62 PG1111C
RA7A 470 LED66 PG1111C
RA16B 470 LED70 PG1111C
RA5B 470 LED10 PG1111C
RA6A 470 LED15 PG1111C
RA6B 470 LED19 PG1111C
RA6C 470 LED23 PG1111C
RA6D 470 LED27 PG1111C
RA9A 470 LED31 PG1111C
RA9B 470 LED35 PG1111C
RA9C 470 LED39 PG1111C
RA9D 470 LED43 PG1111C
RA14A 470 LED47 PG1111C
RA14B 470 LED51 PG1111C
RA14C 470 LED55 PG1111C
RA14D 470 LED59 PG1111C
RA15C 470 LED63 PG1111C
RA7B 470 LED67 PG1111C
RA16C 470 LED71 PG1111C
RA5C 470 LED11 PG1111C
RA7C 470 LED16 PG1111C
RA7D 470 LED20 PG1111C
RA8A 470 LED24 PG1111C
RA8B 470 LED28 PG1111C
RA8C 470 LED32 PG1111C
RA8D 470 LED36 PG1111C
RA11A 470 LED40 PG1111C
RA11B 470 LED44 PG1111C
RA11C 470 LED48 PG1111C
RA11D 470 LED52 PG1111C
RA13A 470 LED56 PG1111C
RA13B 470 LED60 PG1111C
RA13C 470 LED64 PG1111C
RA13D 470 LED68 PG1111C
RA16D 470 LED72 PG1111C
RA5D 470 LED12 PG1111C
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REVISION REASON
DATE
REVISED BY
APPROVED BY
DRAWN BY
Y.NISHIOKA
DESIGNED BY
Y.NISHIOKA
CHECKED BY
MODEL X-9200(TRITON-Rack)
TITLE
KLM-2206
PANEL
KORG
DRAWING NO.
KOD-A30436
DATE
'00.07.05

How to start the test mode

[ENTER] + [5] + POWER ON : Full test
[ENTER] + [2] + POWER ON : Internal test is omitted

How to operate the test mode

INC	:	ITEM UP
DEC	:	ITEM DOWN
>	:	STEP UP
<	:	STEP DOWM
ENTER	:	Stepup (proceed the test)

How to start the test mode or function other than the Triton Rack

[ENTER] + [3] + POWER ON : EXB-MOSS test
[ENTER] + [4] + POWER ON : SIMM FULL test
[ENTER] + [6] + POWER ON : EXB-SCSI test
[ENTER] + [7] + POWER ON : EXB-DI test
[ENTER] + [9] + POWER ON : Version indication
[ENTER] + [0] + POWER ON : Flash Memory Initialization

NOTE: When Flash Memory Initialization is executed, the preload data is erased.

How to adjust the contrast

While operating the test mode, turning the Rotaly encoder enables you to adjust the contrast of the LCD.

NOTE: Do not change the contrast while testing the Backup ROM at the internal test. If it is executed, nothing is indicated in the LCD since the value of the contrast is updated after completing the test.

PART CODE	PART NAME	NOTE	Q'TY
001220500	PCB ASSY KLM-2205/07 TRITON-R	TRITON RACK M.	1
001220600	PCB ASSY KLM-2206 TRITON-R	TRITON RACK M.	1
002072160	72PIN SIMM 16MB	TRITON RACK M.	1
304000110	TR 2SA812-T1B (M6) (TS)	KLM-2205/2207	1
304020230	TR 2SC3661-TA/TB(3K) (TS)	KLM-2205/2207	14
304050140	DIGITAL TR DTC114EKA T146	KLM-2206 TRITO	8
304050150	DIGITAL TR DTA114EKA T146	KLM-2206 TRITO	7
304060290	FET MTD20P03HDLT4(TS)	KLM-2205/2207	2
313005500	LCD NCM6602A	TRITON RACK M.	1
314001400	DIODE RLS-73 TE-11 (TS)	KLM-2205/2207	7
314001400	DIODE RLS-73 TE-11 (TS)	KLM-2206 TRITO	5
314010310	LED HLMF-K200#2UM (TR)	KLM-2206 TRITO	11
314031100	SCHOTTKY DIODE RB081L-20(TS)	KLM-2205/2207	6
314031200	LED HLMF-K200#2UK(TR)	KLM-2206 TRITO	5
314031300	LED PY1112C-430-T(TS)	KLM-2206 TRITO	64
314031600	ZENER DIODE HZM9.1NB3TL(TS)	KLM-2205/2207	1
315000500	DOUBLE DIODE MC-2840-T12-1(TS)	KLM-2205/2207	4
315000600	DOUBLE DIODE MC2838-T12-1 (TS)	KLM-2206 TRITO	23
320001233	IC UPD71051GB-3B4 (S)	KLM-2205/2207	1
320004538	IC HD63266F (S)	KLM-2205/2207	1
320004663	IC HD64F7045F28(BLANK)(S)	KLM-2205/2207	1
320012223	IC MB87F1710 (S)	KLM-2205/2207	2
320012266	IC MBM29F160BE-70PFTN(X9200):S	KLM-2205/2207	4
320012267	IC MB89635RPF-368-BND(S)	KLM-2206 TRITO	1
320040038	IC MX23C6410MC-10 BK4-H (S)	KLM-2205/2207	1
320040039	IC MX23C6410MC-10 BK4-L (S)	KLM-2205/2207	1
320040040	IC MX23C6410MC-10 BK5-H (S)	KLM-2205/2207	1
320040041	IC MX23C6410MC-10 BK5-L (S)	KLM-2205/2207	1
324001015	IC UPC4570G2-E2 (TS)	KLM-2205/2207	10
324003004	IC TC7S08F (TE85L) (TS)	KLM-2205/2207	5
324003010	IC TC7WU04F TE12L (TS)	KLM-2205/2207	2
324003011	IC TC7S86F (TE85R) (TS)	KLM-2205/2207	1
324003020	IC TC9271F (ELP) (TS)	KLM-2205/2207	1
324003042	IC TC7W04F (TE12L) (TS)	KLM-2205/2207	1
324003043	IC TC7W74F (TE12L) (TS)	KLM-2205/2207	1
324004024	IC HD74HC74FPEL (TS)	KLM-2205/2207	1
324004146	IC HD74HC595FPEL (TS)	KLM-2205/2207	4
324004263	IC HD74LV157ATELL(TS)	KLM-2205/2207	2
324009054	IC NJM78M05DLA-TE1(TS)	KLM-2205/2207	1
324011004	IC M5216FP-600C (TS)	KLM-2205/2207	1
324011012	IC M51953BFP-600C (TS)	KLM-2205/2207	1
324013018	IC PQ3TZ53U(TS)	KLM-2205/2207	1
324021003	IC TLC2932IPWR (TS)	KLM-2205/2207	1
324021005	IC AT93C66-10SI/SC2.7 (TS)	KLM-2205/2207	1
324021102	IC SN74LV08APWR (TS)	KLM-2205/2207	3
324021103	IC SN74LV32APWR (TS)	KLM-2205/2207	5

PART CODE	PART NAME	NOTE	Q'TY
324021104	IC SN74LV74APWR (TS)	KLM-2205/2207	1
324021106	IC SN74LV139APWR (TS)	KLM-2205/2207	1
324021108	IC SN74LV138APWR (TS)	KLM-2205/2207	3
324021113	IC SN74LV4040APWR (TS)	KLM-2205/2207	1
324021114	IC SN74LV05APWR (TS)	KLM-2205/2207	1
324021115	IC SN74LV00APWR (TS)	KLM-2205/2207	1
324021116	IC SN74LV02APWR (TS)	KLM-2205/2207	1
324021117	IC SN74LV164APWR (TS)	KLM-2205/2207	3
324022001	IC DS90C402MX (TS)	KLM-2205/2207	1
324023007	IC S-8520F50MC-B0J-T2(TS)	KLM-2205/2207	2
324036008	IC PCM1716E/2K(TS)	KLM-2205/2207	3
324036009	IC PCM1800E/2K(TS)	KLM-2205/2207	1
324037004	IC HY5118164CJC-60-TE1(TS)	KLM-2205/2207	4
330002000	OPTICAL TRANSITTER TOTX176	KLM-2205/2207	1
334000600	PHOTO COUPLER PC-410	KLM-2205/2207	1
335011300	CRYSTAL OSC CA-301 16.0MHZ	KLM-2205/2207	3
335011400	CRYSTAL OSC CA-301 7MHZ	KLM-2205/2207	1
335011900	CRYSTAL OSC CA-301 24.576MHZ	KLM-2205/2207	1
335400138	CERAMIC OSC CSTCC10.0MG-TC(TS)	KLM-2206 TRITO	1
362009007	VR RK11K1140A9L	KLM-2206 TRITO	4
362009036	VR RK09L12B0C0K(G4353853M)	KLM-2205/2207	2
370004500	REC EC16B242041S	KLM-2206 TRITO	1
373009000	SSW SSSS928400	KLM-2205/2207	1
373009300	SSW ESD-11V121	KLM-2205/2207	1
374000600	TSW EVQ11A09K (TR)	KLM-2206 TRITO	51
375015400	PSW SS21-BBIWG	TRITON RACK	1
402004600	COIL 2943-666673	KLM-2205/2207	4
402006500	COIL TC-600M-3A-5026	KLM-2205/2207	1
402006600	COIL TBC0.8X18:0.3X45:0.3X27T	KLM-2205/2207	1
404001070	CHIP COIL BLM11B102SPT:TS	KLM-2206 TRITO	5
404001070	CHIP COIL BLM11B102SPT:TS	KLM-2205/2207	28
405011100	AC-AC ADAPTOR KA171(100V/4.2A)	TRITON RACK JP	1
405011200	AC-AC ADAPTOR KA173(120V/4.2A)	TRITON RACK EX	1
405011200	AC-AC ADAPTOR KA173(120V/4.2A)	TRITON RACK CN	1
405011200	AC-AC ADAPTOR KA173(120V/4.2A)	TRITON RACK US	1
405011300	AC-AC ADAPTOR KA179(230V/4.2A)	TRITON RACK FR	1
405011300	AC-AC ADAPTOR KA179(230V/4.2A)	TRITON RACK UK	1
405011300	AC-AC ADAPTOR KA179(230V/4.2A)	TRITON RACK GE	1
405011300	AC-AC ADAPTOR KA179(230V/4.2A)	TRITON RACK WG	1
405011400	AC-AC ADAPTOR KA175(240V/4.2A)	TRITON RACK AU	1
435001900	FDD (2 MODE) JU-257A726P	TRITON RACK M.	1
454004300	PHONE JACK YKB21-5012	KLM-2205/2207	6
454004400	PHONE JACK YKB21-5010	KLM-2205/2207	1
454005600	PHONE JACK YKB21-5006	KLM-2205/2207	2
454011700	DIN JACK TCS5073-24-4151	KLM-2205/2207	1
464002600	FUSE 125V 4A SB4	TRITON RACK M.	1

PART CODE	PART NAME	NOTE	Q'TY
471050203	CONNECTOR TOPB2P3-VH (U)	KLM-2205/2207	1
471070301	CONNECTOR TOP B3B-PH-K-S (U)	KLM-2205/2207	1
471070501	CONNECTOR TOP B5B-PH-K-S (U)	KLM-2205/2207	1
471070601	CONNECTOR TOP B6B-PH-K-S (U)	KLM-2205/2207	3
471070901	CONNECTOR TOP B9B-PH-K-S (U)	KLM-2206 TRITO	1
471070901	CONNECTOR TOP B9B-PH-K-S (U)	KLM-2205/2207	2
471071101	CONNECTOR TOP B11B-PH-K-S (U)	KLM-2205/2207	1
471071601	CONNECTOR TOP B16B-PH-K-S (U)	KLM-2205/2207	1
474021000	CONNECTOR 34P 5332-34T2	KLM-2205/2207	1
474021100	CONNECTOR 26P 5332-26T2	KLM-2205/2207	1
474021200	CONNECTOR 40P 5332-40GS1	KLM-2205/2207	1
474028900	SIMM CONNECTOR 52706-7220	KLM-2205/2207	11
474031000	CONNECTOR B16B-PHDSS	KLM-2205/2207	1
475002953	HARNESS HNS-2953	TRITON RACK M.	1
475002954	HARNESS HNS-2954	TRITON RACK M.	1
475002955	HARNESS HNS-2955	TRITON RACK M.	1
475002956	HARNESS HNS-2956	TRITON RACK M.	1
475002957	HARNESS HNS-2957	TRITON RACK M.	1
475002980	HARNESS HNS-2980	TRITON RACK M.	1
480010200	DIN SOCKET YKF51-5046	KLM-2205/2207	1
500018300	CASE LEG 3X22X3 KOC-F48035	TRITON RACK M.	4
500032700	X-9200 PCB SPACER KOC-C40920	TRITON RACK M.	1
515002300	FUSE HOLDER S-N5057 #01	KLM-2205/2207	2
620035900	KNOB P422-9PF(D.GR/W)	TRITON RACK M.	4
620036500	X-8410 VR KNOB KOC-E40487	TRITON RACK M.	2
620039000	X-9100 2 LINKAGE KNOB E20204	TRITON RACK M.	5
620039100	X-9100 2X4 LINKAGE KNOB E20205	TRITON RACK M.	3
620039200	X9200 2LINKAGE KNOB H40155-1LG	TRITON RACK M.	1
620039300	X-9200 2X4 KNOB H40156-1-LG	TRITON RACK M.	5
620039500	X-9200 2X4 KNOB H40156-3-LG	TRITON RACK M.	1
620039600	X-9200 ENCODER KNOB E30187-2	TRITON RACK M.	1
630031900	X-9200 LCD WINDOW KOC-E40506	TRITON RACK M.	1
630032100	X-9200 LED FILTER KOC-E40507	TRITON RACK M.	1
641041530	X-7100/7110 OP PLATE C41143	TRITON RACK M.	1
641041586	X-9200 FRONT PANEL KOC-C20366	TRITON RACK M.	1
641041587	X-9200 CASE KOC-C10215	TRITON RACK M.	1
641041588	X-9200 COVER KOC-C30543	TRITON RACK M.	1
641041589	X-9200 FRONT CHASSIS C20367	TRITON RACK M.	1
641041590	X-9200 SIDE ANGLE L C30544-1	TRITON RACK M.	1
641041591	X-9200 SIDE ANGLE R C30544-2	TRITON RACK M.	1
641041592	X9200 FRONT ANGLE R KOC-C41191	TRITON RACK M.	2
641041593	X-9200 OP PLATE 2 KOC-C41187	TRITON RACK M.	1
641041594	X-9200 OP PLATE 3 KOC-C41188	TRITON RACK M.	1
644009000	X-8510 GND SPRING (K) C41167	TRITON RACK M.	1
646042100	X-142 REFLECTOR NO.1 H40076	TRITON RACK M.	5
646074500	X-9100 LCD FRAME KOC-E30257	TRITON RACK M.	1