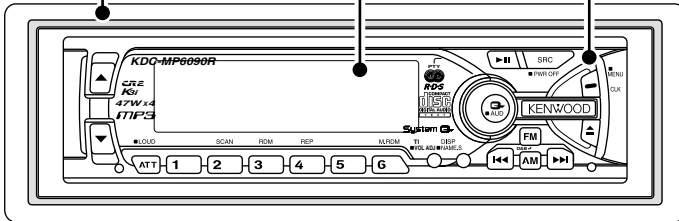


# KDC-MP6090R/MP7018 KDC-MP8017

## SERVICE MANUAL

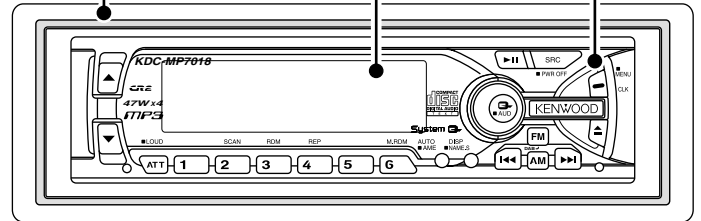
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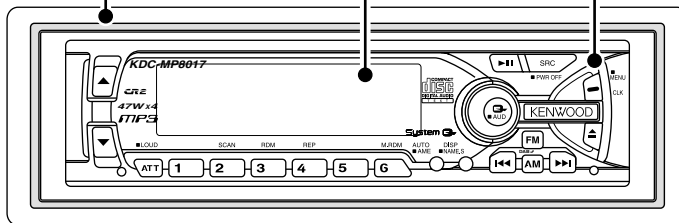
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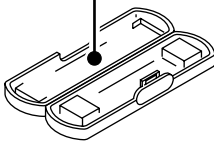


### KDC-MP8017

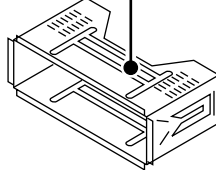
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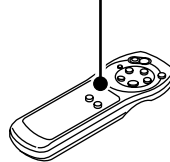
PLASTIC CABINET ASSY (A02-1497-03)



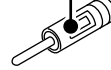
MOUNTING HARDWARE ASSY (J21-9641-13)



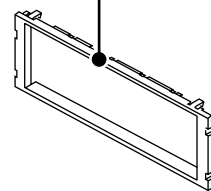
REMOTE CONTROLLER ASSY (A70-0883-05) : KDC-MP7018



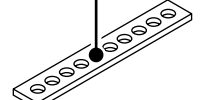
ANTENNA ADAPTOR (T90-0523/0534-05) : KDC-MP6090R



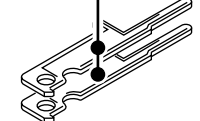
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KDC-MP7018



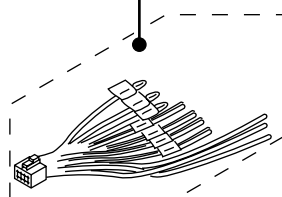
STAY (J54-0606-04) : KDC-MP8017  
KDC-MP7018



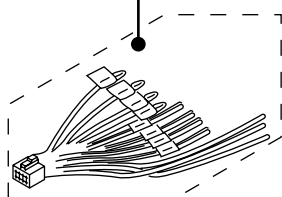
LEVERx2 (D10-4562-04)



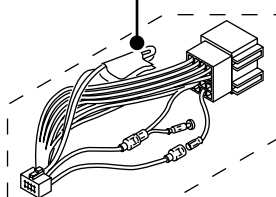
DC CORD (E30-4940-05) : KDC-MP8017



DC CORD (E30-4939-05) : KDC-MP7018



DC CORD (E30-4943-05) : KDC-MP6090R



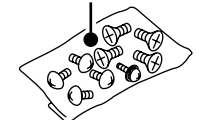
BATTERY (SIZE: AAA) Not supplied as service parts



SCREW SET (N99-1704-05)



SCREW SET (N99-1700-05) : KDC-MP8017  
KDC-MP7018



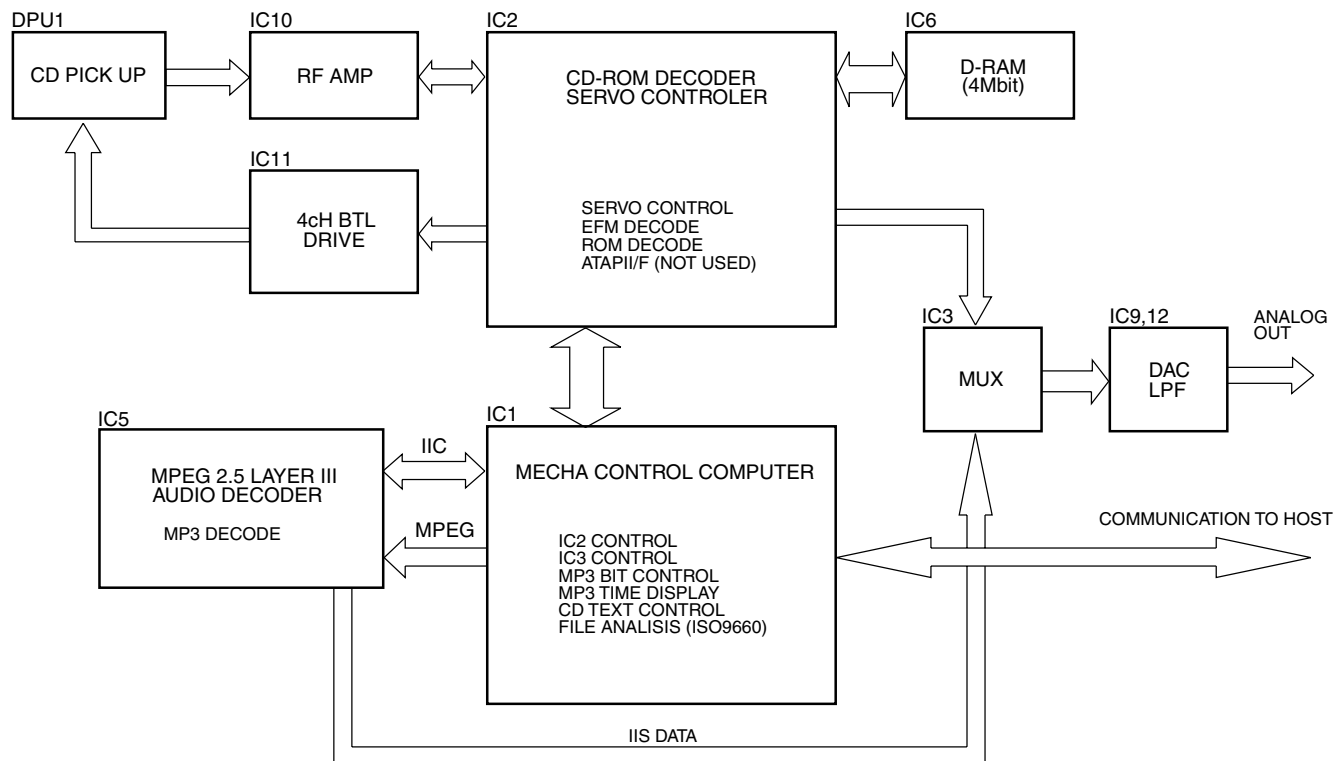
The MECHANISM OPERATION DESCRIPTION is the same as model KDC-S3007 and KDC-5050RG.  
Please refer to the service manual for model KDC-S3007(B51-7029-00) or KDC-5050RG(B51-7099-00).



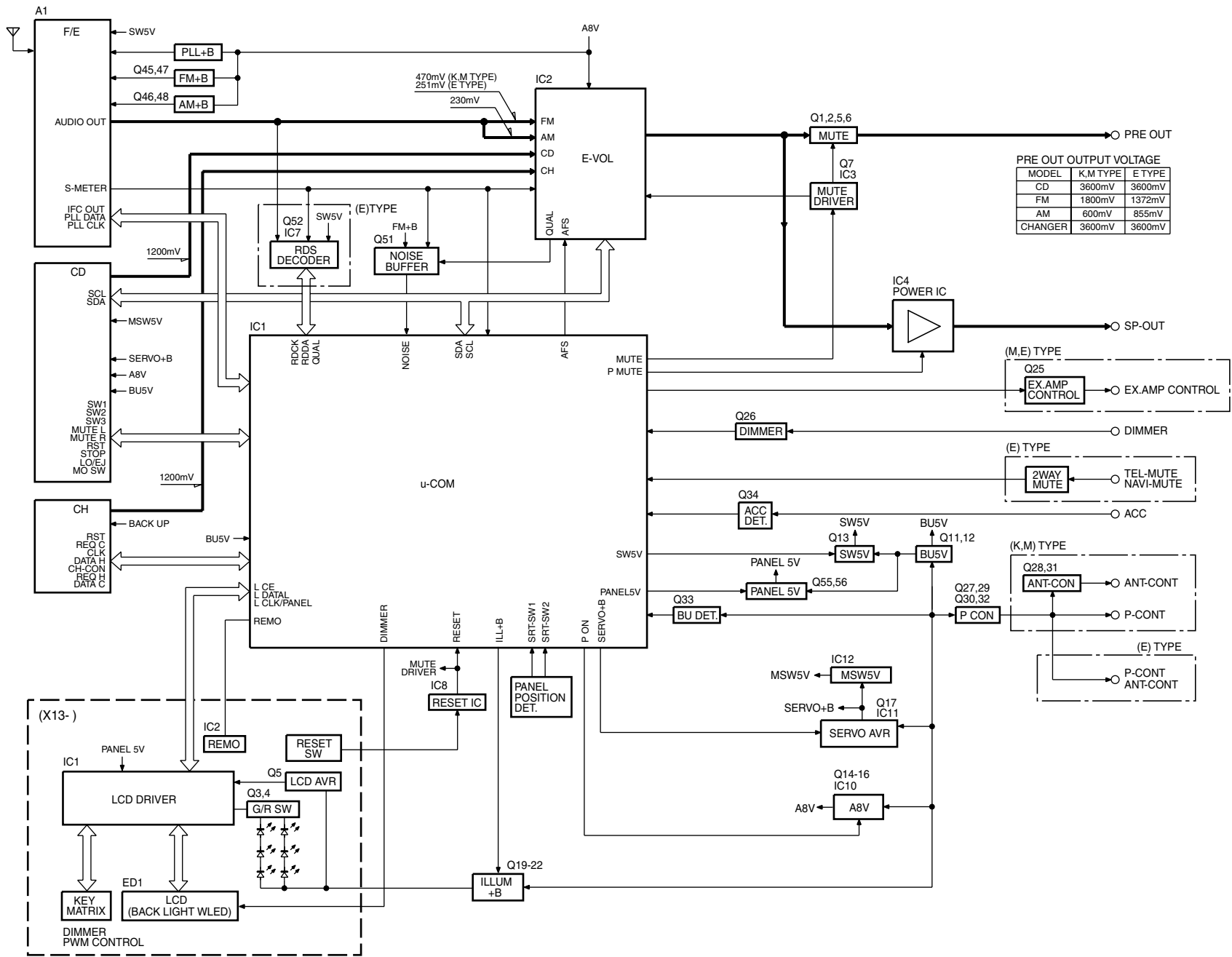
# KDC-MP6090R/MP7018/MP8017

## BLOCK DIAGRAM

DMX-1760 BLOCK DIAGRAM



## BLOCK DIAGRAM



# KDC-MP6090R/MP7018/MP8017

## COMPONENTS DESCRIPTION

### ● SWITCH UNIT (X13-9960-11)

Ref.No.	Component Name	Application/Function	Operation/Condition/Compatibility
IC1	LC75808W	LCD driver with the key matrix	
IC2	RS-171	Remote sensor IC	
Q1	DTA114EUA or KRA302	Key-permission SW	For the key scanning start
Q3	2SD2114K	Red LED SW	When a base goes "Hi", RED LEDs are turned on.
Q4	2SD2114K	Green LED SW	When a base goes "Hi", GREEN LEDs are turned on.
Q5	2SC2412K or 2SD601A	VLCD AVR	
Q6	DTA114EUA or KRA302	REMO SW	While a base goes "Lo", PAN 5V is supplied to the Remote sensor IC.
Q7	DTC143ZK	Dimmer SW	Usually Q7's base goes "Hi". When DIMMER mode is selected, pulse wave shape is applied to Q7's base.

### ● ELECTRIC UNIT (X25-880X-XX)

Ref.No.	Component Name	Application/Function	Operation/Condition/Compatibility
IC1	UPD703033GC057	System MI-COM.	
IC2	TDA7407D	E.VOL & N.C.MPX IC	
IC3	HD74HC02FP or TC74HC02AF	Mute logic	2-input NOR x 4
IC4	TA8263BH	Power IC	
IC7	TDA7479D	RDS decoder	
IC8	S-80837ANNP	Reset IC	When BU 5V voltage is less than 3.7V, IC outputs "Lo".
IC10	M5237ML	AVR IC	IC is combined with Q15, and it works as the error detection, the driver.
IC11	LM2595S-ADJ	SERVO +B AVR	Output voltage 7.5V. A DC/DC Converter built-in the ON/OFF function.
IC12	BA05T	SW 5V AVR	Output voltage is 5.0V.
Q1	DTC143TUA or KRC410	Pre mute (Front L)	When Q1's base goes "Hi", Pre-output is muted.
Q2	DTC143TUA or KRC410	Pre mute (Front R)	When Q2's base goes "Hi", Pre-output is muted.
Q5	DTC143TUA or KRC410	Pre mute (Rear L)	When Q5's base goes "Hi", Pre-output is muted.
Q6	DTC143TUA or KRC410	Pre mute (Rear R)	When Q6's base goes "Hi", Pre-output is muted.
Q7	DTA124EUA or KRA303	Mute driver	When BU detection SW or System RESET or MI-COM.'s Pre-mute is working, a base goes "Lo", and Q7 is turned on.
Q11	2SC4081 or 2SD1819A	BU 5V AVR	While BACKUP is applied, AVR outputs +5V.
Q12	2SB1548(P)		Q11 and Q12 are inverted Darlington connection.
Q13	2SA1576A or 2SB1218A	SW 5V	While a base goes "Lo", SW 5V is supplied to the microprocessor peripheral circuits.
Q14	DTC144EUA or UN5213	SW14V SW	A8V AVR ON/OFF control
Q16	DTA124EUA or KRA303		While Q14's base goes "Hi", Q16 is turned on, and A8V AVR is working.
Q15	2SB1548(P)	A8V AVR	Q15 is combined with IC10, and it outputs 8V.
Q17	DTC144EUA or UN5213	SERVO +B SW	When a base goes "Hi", Q17 is turned on, and SERVO +B AVR is working.
Q19	DTC124EUA or UN5212	ILL +B SW	ILL +B AVR ON/OFF control
Q20	DTA124EUA or KRA303		While Q19's base goes "Hi", Q20 is turned on, and ILL +B AVR is working.
Q21	2SB1184	ILL +B AVR	While Q22's base goes "Hi", AVR outputs +10.5V.
Q22	2SC4081 or 2SD1819A		Works during POWER ON mode with a panel attached to the set.
Q25	DTA123JK or KRA105S	EXT. AMP CON. SW	When a base goes "Lo", Q25 is turned on.
Q26	DTC144EUA or UN5213	Small lamp detection SW	When vehicle small lamps turn on, Q26 is turned on .
Q27	DTC114YUA or UN5214	P-CON SW	When Q27's base goes "Hi", Q32 is turned on .
Q32	2SB1277(Q,R)		Works during POWER ON mode.
Q29	DTA124EUA or KRA303	P-CON. protection inhibit SW	Prevents Q30 tuning ON during start-up after power ON.
Q30	2SA1576A or 2SB1218A	P-CON. protection SW	Protect Q32 by turning ON when P-CON output is grounded.
Q28	DTC114YUA or UN5214	ANT-CON. SW	Q31 is turned on when Q28's base goes "Hi".
Q31	2SB1277(Q,R)		Works during TUNER mode.

## COMPONENTS DESCRIPTION

Ref.No.	Component Name	Application/Function	Operation/Condition/Compatibility
Q33	2SC4081 or 2SD1819A	BU detection SW	While BACKUP is applied, a base goes "Hi", and Q33 is turned on. When momentary power down has detected, a base goes "Lo", and Q33 is turned off.
Q34	2SC4081 or 2SD1819A	ACC detection SW	While ACC is applied, a base goes "Hi", and Q34 is turned on.
Q42	DTC124EUA or UN5212	E. VOL mute SW	When BU detection SW or MI-COM.'s mute is working, a base goes "Hi", and Q42 is turned on.
Q45	DTC124EUA or UN5212	FM +B SW	When Q45's base goes "Hi", Q47 is turned on . Works during FM reception mode.
Q47	2SB1277(Q,R)		
Q46	DTC124EUA or UN5212	AM +B SW	When Q46's base goes "Hi", Q48 is turned on . Works during AM reception mode.
Q48	2SB1277(Q,R)		
Q51	2SC4081 or 2SD1819A	Noise buffer	
Q52	2SC4081 or 2SD1819A	Composite signal output buffer	
Q53	DTC144EUA or UN5213	IFC buffer	Waveform shaping
Q55	2SA1576A or 2SB1218A	PAN 5V SW	While a panel is attached to the set, Q56's base goes "Hi", and Q55 is turned on.
Q56	DTC124EUA or UN5212		

### ● PROCESSOR UNIT (X32-5080-00)

Ref.No.	Component Name	Application/Function	Operation/Condition/Compatibility
IC1	M30620MCAB12GP	MECHA. control MI-COM	Mechanism / servo processing control, MP3 data conversion of serial to parallel, DSP and D/A converter control
IC2	UPD63724B	DSP (CD-ROM decoder, servo controller)	Focusing,tracking,sled and spindle servo processing. Automatic adjustment (focusing, tracking, gain, offset and balance) operations. Digital signal processing(DSP and etc.), PLL, ROM decode processing.
IC3	TC74HC157AF	Quad 2-channel multiplexer	CD-DA/MP3 Clock and Data lines (MCLK, LRCK, CLK, DATA) switching
IC4	LP2982-3.3	3.3V AVR	AVR for audio interface and quad multiplexer
IC5	STA013	MP3 Audio decoder	MP3 DSP
IC6	MSM514260CP-60	4M bit DRAM	Buffer memory
IC7	TC7SH04F	Inverter	Clock buffer for MP3 audio decoder
IC8	TA78L05F	5V AVR	AVR outputs +5V for D/A converter analogue part.
IC9	PCM1716E	24Bit D/A converter	24Bit D/A converter built-in digital filter and de-emphasis function
IC10	UPC2575GS	RF amplifier	Generation of RF signal based on the signals from the APC circuit and pickup, and generation of servo error (focusing error and tracking error) signals. Detection of dropout, anti-shock, and track crossing conditions.
IC11	BA5917AFP	BTL driver	Focusing coil, tracking coil, spindle motor and sled motor driver
IC12	NJM5532MD	OP Amp.	Low pass filter
IC13	NJM2903M	Vibration detector	When a disc vibration is detected , and is outputted "Lo".
Q1	MCH6101	A.8V SW	A8V ON/OFF control. When a base goes "Lo", Q1 is turned on.
Q2	DTC124EUA	P ON SW	When CD source is selected, Q2's base goes "Hi", Q1 and Q3 are turned on.
Q3	MCH6101	D.5V SW	D5V ON/OFF control. When a base goes "Lo", Q3 is turned on.
Q4	DTC124EUA	MOTOR SW	When CD loading or eject operation is activating, Q4's base goes "Hi", Q1 and Q3 are turned on.
Q5	2SK3018	Level shifting	MP3 data request line with MECHA. MI-COM. and STA013
Q6	2SK3018	Level shifting	Clock line for the control communication with MECHA. MI-COM. and STA013
Q7	2SK3018	Level shifting	Data line for the control communication with MECHA. MI-COM. and STA013
Q8	MCH6101	APC	LD APC
Q9	DTC124EUA	EQ switching SW	When a base goes "Hi", Q9 is turned on and is changed to IC10's EQ for normally velocity.

## MICROCOMPUTER'S TERMINAL DESCRIPTION

## ● IC1 (ELECTRIC UNIT : X25-880X-XX)

Pin No.	Pin Name	I/O	Description	Processing Operation
1	AM+B	O	AM+B control	"Hi": During AM reception
2	FM+B	O	FM+B control	"Hi": During FM reception, "Hi": Last FM mode (only RDS model)
3	AFS	O	Noise detection time constant switching terminal	"Hi": During FM reception, "Lo": During FM seek or AF search
4	PLL-DATA	I/O	Data input/output with F/E	
5	PLL-CLK	I/O	Clock input/output with F/E	
6	EVDD	-	Power supply connection terminal	Connected to BU 5V lines.
7	EVSS	-	Ground connection terminal	Connected to GND.
8	NC	O		Not used (N.C.)
9	BEEP	O	BEEP sound output	
10	REMO	I	Data input from the remote control light sensor	
11	CH-REQH	O	Request output to changers	"Lo": Request
12	CH-RST	O	Reset output to changers	$\overline{\text{RST}}$ : Reset
13	IC2-SDA	I/O	Data line with IC2, IC5 and CD MECHA. MI-COM.	
14	IC2-CLK	I/O	Clock line with IC2, IC5 and CD MECHA. MI-COM.	
15	CH-MUTE	I	Mute request from changers	"Hi": Mute request
16	CH-CON	O	Changer control	"Hi": Operation mode, "Lo": Standby mode
17	DIMMER-CON	O	Dimmer control output	Pulse wave shape: DIMMER mode, "Hi": POWER ON
18	TEST	-	Test terminal	Not used (connected to GND lines)
19	P-MUTE	O	Power IC mute control output	"Lo": Mute (POWER OFF, TEL MUTE)
20	P-STBY	O	Power IC standby control output	"Hi": POWER ON mode except panel detached or panel mask position
21	MUTE	O	IC2 mute control output	"Hi": Mute on
22	NC	O		Not used (N.C.)
23	PRE-MUTE	O	Pre-outputs mute control output	"Lo": Mute
24	ACC-DET	I	ACC detection input	"Hi": ACC OFF, "Lo": ACC ON
25	DIMMER	I	Small lights detection input	"Lo": During vehicle small lamps turn on
26	SW5V	O	SW 5V control output	"Lo": POWER ON mode or during CD loading/eject action
27	EXT-AMP-CON	O	External amp. control output	Bass boost OFF__ "Hi": 160msec, "Lo": 40msec Bass boost LOW__ "Hi": 130msec, "Lo": 70msec Bass boost HI__ "Hi": 100msec, "Lo": 100msec
28	P-CON	O	Power control output	"Hi": POWER ON mode except ALL OFF mode
29	ANT-CON	O	Antenna control output	"Hi": During FM/AM reception or TI reception
30	P-ON	O	SW 14V control output	"Hi": POWER ON mode or during CD loading/eject action
31	RESET	I	Reset input terminal	"Lo": System reset
32	XT1	I	Sub clock resonator connection terminal	Clock count during POWER OFF mode
33	XT2	-	Sub clock resonator connection terminal	
34	REGC	-	C terminal	
35	X2	-	Main clock resonator connection terminal	Oscillation stop: POWER OFF mode or momentary power down detected
36	X1	I	Main clock resonator connection terminal	
37	VSS	-	Ground connection terminal	Connected to GND lines.
38	VDD	-	Power supply connection terminal	Connected to BU 5V lines.
39	CLKOUT	O	Internal system clock output	Not used (N.C.)
40	SERVO+B	O	SERVO +B control	"Hi": CD source selected except panel detached or panel mask position or during CD loading/eject action
41	NC	O		Not used (N.C.)
42	TYPE0	I	Destination type input terminal 0	
43	TYPE1	I	Destination type input terminal 1	
44	TYPE2	I	Destination type input terminal 2	
45	TYPE3	I	Destination type input terminal 3	
46	IC2TYPE0	I	IC2 setting terminal	"Lo": Initial value
47	IC2TYPE1	I	IC2 setting terminal	"Lo": Initial value

## MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Description	Processing Operation
48-51	NC	O		Not used (N.C.)
52	ILL-ON	O	Illumination AVR on/off control output	"Hi": POWER ON mode except panel detached or panel mask position
53	M-MUTE L	I	Mute request (Lch) from CD MECHA. MI-COM.	"Lo": Mute request
54	M-MUTE R	I	Mute request (Rch) from CD MECHA. MI-COM.	"Lo": Mute request
55	BVDD	-	Power supply connection terminal	Connected to BU 5V lines.
56	BVSS	-	Ground connection terminal	Connected to GND lines.
57	M-RST	O	Reset output to CD MECHA. MI-COM.	"Lo": Reset
58	M-STOP	O	Stop request to CD MECHA. MI-COM.	"Lo": Stop mode, "Hi": Operation mode
59	NC	O		Not used (N.C.)
60	LO/EJ	I/O	CD MECHA. loading/Eject switching output	"Lo": Loading, "Hi": Eject, "Hi-Z": Stop or Break
61	MOSW	O	CD mechanism loading motor control output	"Hi": CD loading/eject action or Break, "Lo": other
62	NC	O		Not used (N.C.)
63	CD-SW3	I	Down & limit switch detection input	"Hi": Chucking, "Lo": Pickup most inner position
64	NC	O		Not used (N.C.)
65	L-CE	I/O	CE output to LCD driver	
66-69	NC	O		Not used (N.C.)
70	AVCONT	O	A/D converter reference voltage control output	"Hi": Active, Connected to AVREF terminal.
71	AVDD	-	A/D converter power supply connection terminal	Connected to BU 5V lines.
72	AVSS	-	A/D, D/A converter ground connection terminal	Connected to GND lines.
73	AVREF	I	A/D converter reference voltage input terminal	
74	PHONE	I	PHONE detection input	1V or less: TEL MUTE, 2.5V or greater: NAVI MUTE
75	NC(GND)	I		Not used (pull down to GND lines)
76	NC(GND)	I		Not used (pull down to GND lines)
77	SRT-SW2	I	SRT position detection input	Panel: (SW1, SW2)=(Hi, Hi) Slide: (SW1, SW2)=(Hi, Lo) Mask : (SW1, SW2)=(Lo, Lo)
78	SRT-SW1	I	SRT position detection input	
79	NOISE	I	FM noise detection input	
80	S-METER	I	S-meter input from F/E	
81	R-DATA	I	Data input from the RDS decoder IC	Except RDS model: Not used (pull down to GND lines)
82	R-QUAL	I	Quality input from the RDS decoder IC	Except RDS model: Not used (pull down to GND lines)
83	IFC-OUT	I	F/E IFC OUT input terminal	"Hi": Station detected, "Lo": Not detected
84	NC(GND)	I		Not used (pull down to GND lines)
85	NC(GND)	I		Not used (pull down to GND lines)
86	NC	O		Not used (N.C.)
87	R-CLK	I	Clock input from the RDS decoder IC	Except RDS model: Not used (pull down to GND lines)
88	CH-REQC	I	Request input from changers	"Lo": Request
89	KEY-REQ	I	Communication request input form LCD driver IC	
90	CD-SW1	I	Loading detection	"Lo": CD chucking.
91	CD-SW2	I	12cm disc detection terminal	When 12cm disc was detected, the input becomes "Lo" temporarily.
92	NC	O		Not used (N.C.)
93	BU-DET	I	Momentary power down detection input	"Hi" : When momentary power down detected or BU OFF "Lo" : BU ON
94	CH-DATAC	I	Data input from changers	
95	CH-DATAH	O	Data output to changers	
96	CH-CLK	I/O	Clock input/output with changers	
97	L-DATAL	I	Data input from the LCD driver IC	
98	L-DATAS	I/O	Data output to the LCD driver IC	
99	L-CLK	I/O	Clock output to the LCD driver IC/Panel detaching detection input (LCD Driver)	"Lo": Panel attached
100	PAN5V	O	Panel 5V control	"Hi": Panel attached, "Lo": Panel detached

# KDC-MP6090R/MP7018/MP8017

## MICROCOMPUTER'S TERMINAL DESCRIPTION

### ● IC1 (PROCESSOR UNIT : X32-5080-00)

Pin No.	Pin Name	I/O	Description	Processing Operation
1	DA1	O		Not used (N.C.)
2	DA0	O		Not used (N.C.)
3	SOUT3	O		Not used (N.C.)
4	SIN3	O		Not used (N.C.)
5	CLK3	O		Not used (N.C.)
6	BYTE	I	Bus width (8bit/16bit) setting terminal	"Lo": 16bit, "Hi": 8bit
7	CNVSS	I	Processor mode setting terminal	Not used (pull down to GND lines)
8	XCIN	O	-	Not used (N.C.)
9	XCOUT	O	-	Not used (N.C.)
10	RESET	I	RESET terminal	"Lo": Reset
11	XOUT	O	Main clock resonator connection terminal	
12	VSS	-	Ground connection terminal	Connected to GND lines.
13	XIN	I	Main clock resonator connection terminal	
14	VCC	-	Power supply connection terminal	Connected to BU 5V lines.
15	NMI	I	Non-maskable interrupt terminal	Not used (pull up to BU 5V lines)
16	INT2	I	Servo DSP (Processor part) interrupt input	"Lo": Processor interrupt
17	INT1	I	Servo DSP (Decoder part) interrupt input	"Lo": Decoder interrupt
18	INT0	I	Servo DSP (ATAPI part) interrupt input	"Lo": ATAPI interrupt
19	TA4IN	O	-	Not used (N.C.)
20	TA4OUT	O	-	Not used (N.C.)
21	DCS	O	DAC chip select output	"Lo": Chip select
22	PD	O	DAC reset terminal	"Lo": Reset
23	ML	O	Data latch output to DAC and MECHA. MI-COM.	"Hi": Latch
24	MC	O	Clock output to DAC and MECHA. MI-COM.	
25	MD	O	Data output to DAC and MECHA. MI-COM.	
26	TA1OUT	O	-	Not used (N.C.)
27	I2C CLK	I/O	Clock input/output with system MI-COM.	
28	I2C DATA	I/O	Data input/output with system MI-COM.	
29	MP3 I2C DATA	I/O	Data input/output with IC5 (STA013)	
30	R	O	Flash ROM read control	Not used (N.C.)
31	MP3 I2C CLK	I/O	Clock input/output with IC5 (STA013)	
32	W	O	Flash ROM write control	Not used (N.C.)
33	MP3 DATA	O	MP3 data output to IC5 (STA013)	
34	RXDO	O	-	Not used (pull down to GND lines)
35	MP3 CLK	O	MP3 clock output to IC5 (STA013)	
36	MP3 REQ	I	MP3 data request from IC5 (STA013)	
37	WAIT	I	Multiplex bus wait terminal	"Lo": Busy, "Hi": Ready
38	ALE	O	Multiplex bus address latch	$\overline{\text{L}}$ : Latch
39	HOLD	I	Flash ROM hold control	Not used (pull up to BU 5V lines)
40	HLDA	O	-	Not used (N.C.)
41	BCLK	O	-	Not used (N.C.)
42	RDM	O	Multiplex bus data read control	"Lo": Data read
43	WRH/BHE	O	Odd/even address select terminal (not use at 8bit bus)	Not used (N.C.)
44	WRM	O	Multiplex bus data write control	"Lo": Data write
45	CS3	O	-	Not used (N.C.)
46	CS2	O	M24B chip select	"Lo": chip select
47	CS1	O	-	Not used (N.C.)
48	CS0	O	-	Not used (N.C.)
49	A19	O	-	Not used (N.C.)
50	A18	O	-	Not used (N.C.)



## MICROCOMPUTER'S TERMINAL DESCRIPTION

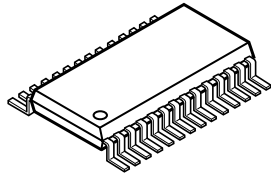
Pin No.	Pin Name	I/O	Description	Processing Operation
51	SCTL	O	RF 1x/2x velocity select	"Lo": 2x, "Hi": 1x
52	RESET	O	RESET terminal	"Lo": Reset
53	A15	O	-	Not used (N.C.)
54	MUTE-R	O	Mute request (R Ch) terminal	"Lo": Mute requested
55	MUTE-L	O	Mute request (L Ch) terminal	"Lo": Mute requested
56	LDON	O	Laser on/off control terminal	"Lo": Laser off, "Hi": Laser on
57	MP3/CD	O	CD-DA/MP3 select terminal	"Lo": CD-DA, "Hi": MP3
58	PON	O	Peripheral circuits power control terminal	"Lo": Power off, "Hi": Power on
59	CDRW	O	RW select terminal	"Hi": CD-R/W
60	VCC	-	Power supply connection terminal	Connected to BU 5V lines.
61	A8	O	-	Not used (N.C.)
62	VSS	-	Ground connection terminal	Connected to GND lines.
63	A7/D7	I/O	Multiplex bus address/data (7bit) line	
64	A6/D6	I/O	Multiplex bus address/data (6bit) line	
65	A5/D5	I/O	Multiplex bus address/data (5bit) line	
66	A4/D4	I/O	Multiplex bus address/data (4bit) line	
67	A3/D3	I/O	Multiplex bus address/data (3bit) line	
68	A3/D2	I/O	Multiplex bus address/data (2bit) line	
69	A1/D1	I/O	Multiplex bus address/data (1bit) line	
70	A0/D0	I/O	Multiplex bus address/data (0bit) line	
71	RFOK	I	RFOK interrupt input	Not used ("Lo": Interrupt)
72	MSTOP	I	MSTOP detection terminal	"Lo": Standby mode, "Hi": Operation mode
73	INT4	I	Servo DSP (Servo part) interrupt input	"Lo": Interrupt
74	D12	O	-	Not used (N.C.)
75	D11	O	-	Not used (N.C.)
76	D10	O	-	Not used (N.C.)
77	D9	O	-	Not used (N.C.)
78	D8	O	-	Not used (N.C.)
79	T3	I	Test terminal (for development)	Not used (connected to GND lines)
80	T2	I	Test terminal (for development)	Not used (connected to GND lines)
81	T1	I	Test terminal (for development)	Not used (connected to GND lines)
82	EMPH	I	Emphasis on/off input	"Lo": Emphasis off, "Hi": Emphasis on
83	RFOK	I	RFOK input	"Lo": RF NG, "Hi": RF OK
84	D2	O	-	Not used (N.C.)
85	SW3	I	Down & limit switch detection input	"Hi": Chucking, "Lo": Pickup most inner position
86	DETECT	I	Vibration detection input	"Lo": Vibration detected
87	AN7/KI3	O	-	Not used (N.C.)
88	AN6/KI2	O	-	Not used (N.C.)
89	AN5/KI1	O	-	Not used (N.C.)
90	AN4/KI0	O	-	Not used (N.C.)
91	AN3	O	-	Not used (N.C.)
92	AN2	O	-	Not used (N.C.)
93	AN1	O	-	Not used (N.C.)
94	AVSS	-	A/D converter ground connection terminal	Connected to GND lines.
95	AN0	O	-	Not used (N.C.)
96	VREF	-	A/D converter reference voltage input terminal	Not used (connected to GND lines)
97	AVCC	-	A/D converter power supply connection terminal	Connected to BU 5V lines.
98	SIN4	O	-	Not used (N.C.)
99	SOUT4	O	-	Not used (N.C.)
100	CLK4	O	-	Not used (N.C.)

# KDC-MP6090R/MP7018/MP8017

## CIRCUIT DESCRIPTION (MP3)

### MP3 DSP IC : STA013 (X32-5080 : IC5)

#### OUT SIDE VIEW



- SINGLE CHIP MPEG2 LAYER 3 DECODER SUPPORTING.
  - Note** (Z919 is guaranteed to the MPEG 1.0 Layer III.)
  - All features specified for Layer III in ISO/IEC11172-3 (MPEG 1 Audio)
  - All features specified for Layer III in ISO/IEC13818-3.2 (MPEG 2 Audio)
  - Lower sampling frequencies syntax extension, (not specified by ISO) called MPEG2.5
- DECODES LAYER III STEREO CHANNELS, DUAL CHANNEL, SINGLE CHANNEL (MONO)
- SUPPORTING ALL THE MPEG 1 & 2 SAMPLING FREQUENCIES AND THE EXTENSION TO MPEG 2.5: 48, 44.1, 32, 24, 22.05, 16, 12, 11.025, 8kHz
- ACCEPTS MPEG 2.5 LAYER III ELEMENTARY COMPRESSED BIT STREAM WITH DATA RATE FROM 8 Kbit/s UP TO 320 Kbit/s
- DIGITAL VOLUME CONTROL
- DIGITAL BASS & TREBLE CONTROL
- SERIAL BITSTREAM INPUT INTERFACE
- ANCILLARY DATA EXTRACTION VIA I<sup>2</sup>C INTERFACE
- SERIAL PCM OUTPUT INTERFACE (I<sup>2</sup>C AND OTHER FORMATS)

- PLL FOR INTERNAL CLOCK AND FOR OUTPUT PCM CLOCK GENERATION
- LOW POWER CONSUMPTION: 85mW AT 2.4V
- CRC CHECK AND SYNCHRONISATION ERROR DETECTION WITH SOFTWARE INDICATORS
- I<sup>2</sup>C CONTROL BUS
- LOW POWER 3.3V CMOS TECHNOLOGY
- 10MHz, 14.31818 MHz, OR 14.7456MHz EXTERNAL INPUT CLOCK OR BUILT-IN INDUSTRY STANDARD XTAL OSCILLATOR DIFFERENT FREQUENCIES MAY BE SUPPORTED UPON REQUEST TO STM

**Note** EXTERNAL CLOCK: 10MHz

#### APPLICATIONS

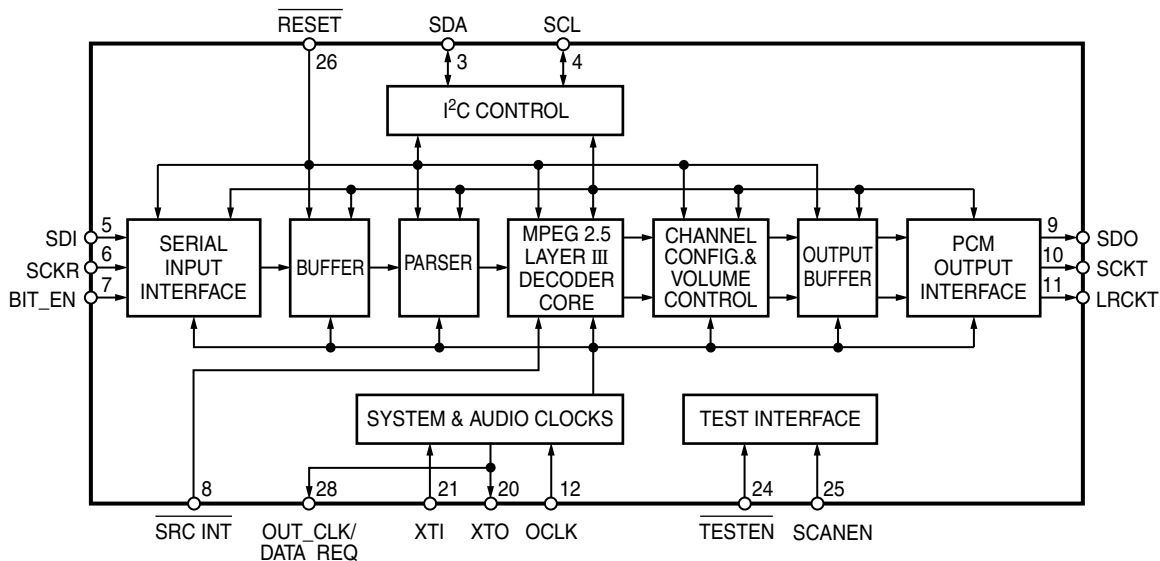
- PC SOUND CARDS
- MULTIMEDIA PLAYERS

#### DESCRIPTION

The STA013 is a fully integrated high flexibility MPEG Layer III Audio Decoder, capable of decoding Layer III compressed elementary streams, as specified in MPEG 1 and MPEG 2 ISO standards. The device decodes also elementary streams compressed by using low sampling rates, as specified by MPEG 2.5.

STA013 receives the input data through a Serial Input Interface. The decoded signal is a stereo, mono, or dual channel digital output that can be sent directly to a D/A converter, by the PCM Output Interface. This interface is software programmable to adapt the STA013 digital output to the most common DACs architectures used on the market.

The functional STA013 chip partitioning is described in Fig. 1.

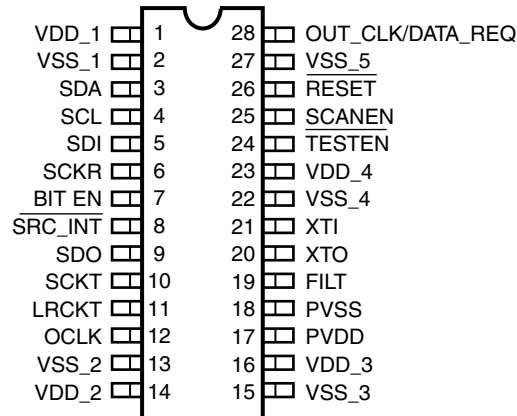


**Fig. 1 Block diagram: MPEG 2.5 Layer III Decoder hardware Partitioning**

# KDC-MP6090R/MP7018/MP8017

## CIRCUIT DESCRIPTION (MP3)

### ■ Pin Connection



### ■ Pin Description

Pin No.	Pin Name	Type	Function	PAD Description
1	VDD_1		Supply Voltage	
2	VSS_1		Ground	
3	SDA	I/O	I <sup>2</sup> C Serial Data +Acknowledge	CMOS Input Pad Buffer CMOS 4mA Output Drive
4	SCL	I	I <sup>2</sup> C Serial Clock	CMOS Input pad Buffer
5	SDI1	I	Receiver Serial Data	CMOS Input Pad Buffer
6	SCKR	I	Receiver Serial Clock	CMOS Input Pad Buffer
7	BIT_EN	I	Bit Enable	CMOS Input Pad Buffer with pull up
8	SRC_INT	I	Interrupt Line For S.R.Control	CMOS Input Pad Buffer
9	SDO	O	Transmitter Serial data (PCM Data)	CMOS 4mA Output Drive
10	SCKT	O	Transmitter Serial Clock	CMOS 4mA Output Drive
11	LRCKT	O	Transmitter Left/Right Clock	CMOS 4mA Output Drive
12	OCLK	I/O	Oversampling Clock for DAC	CMOS Input Pad Buffer CMOS 4mA Output Drive
13	VSS_2		Ground	
14	VDD_2		Supply Voltage	
15	VSS_3		Ground	
16	VDD_3		Supply Voltage	
17	PVDD		PLL Power	
18	PVSS		PLL Ground	
19	FILT	O	PLL Filter Ext. Capacitor Conn.	
20	XTO	O	Crystal output	CMOS 4mA Output Drive
21	XTI	I	Crystal Input (Clock Input)	Specific Level Input Pad
22	VSS_4		Ground	
23	VDD_4		Supply Voltage	
24	TESTEN	I	Test Enable	CMOS Input Pad Buffer with pull up
25	SCANEN	I	Scan Enable	CMOS Input Pad Buffer
26	RESET	I	System Reset	CMOS Input Pad Buffer with pull up
27	VSS_5		Ground	
28	OUT_CLK/DATA_REQ	O	Buffered Output Clock/Data Request Signal	CMOS 4mA Output Drive

**Note :** SRC\_INT signal is used by STA013 internal software in Broadcast mode only; in Multimedia mode SRC\_INT must be connected to VDD.  
In Functional mode TESTEN must be connected to VDD, SCANEN to ground.

# KDC-MP6090R/MP7018/MP8017

## CIRCUIT DESCRIPTION (MP3)

### FUNCTIONAL DESCRIPTION

#### ● Clock Signal

The STA013 input clock is derived from an external source or from a industry standard crystal oscillator, generating input frequencies of 10, 14.31818 or 14.7456MHz.

**Note Z919 : 10MHz**

XTI is an input Pad with specific levels

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V <sub>IL</sub>	Low Level Input Voltage				VDD-1.8	V
V <sub>IH</sub>	Hight Level Input Voltage		VDD-0.8			V

#### • CMOS compatibility

The XTI pad low and high levels are CMOS compatible; XTI pad noise maegin is better than typical CMOS pads.

#### • TTL compatibility

The XTI pad low level is compatible with TTL while the high level is not compatible (for example if VDD = 3V TTL min high level = 2.0V while XTI min high level = 2.2V)

#### ● Serial Input Interface

STA013 receives the input data (MSB first) thoutht the Serial input Interface (Fig. 2). It is a siriial communication interface connected to the SDI (Serial Data Input) and SCKR (Receiver Serial Clock).

The interface can be configured to receive data sampled on both rising and falling edge of the SCKR clock.

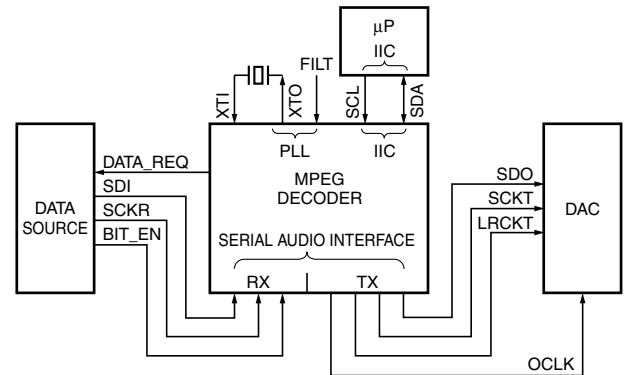
The BIT\_EN pin, when set to low, forces the bitstream input interface to ignore the incoming data. For proper operation BIT\_EN line shold be toggled only when SCR is stable low (for both SCLK\_POL configuration) The possible configurations are described in Fig. 3.

#### ● PLL & Clock Generator System

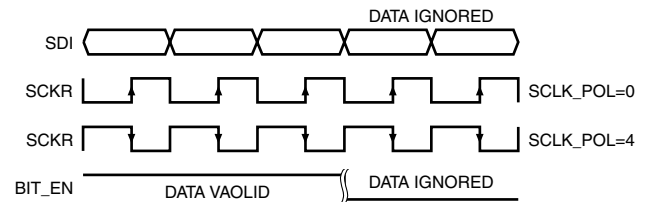
When STA013 receives the input clock, as described in “Clock Signal”, and a valid layer III input bit stream, the internal PLL locks, providing to the DSP Core the master clock (DCLK), and to the Audio Output Interface the nominal frequencies of the incoming compressed bit stream. The STA013 PLL block diagram is described in Figure 4.

The audio sample rates are obtained diving the oversampling clock (OCLK) by software programmable factors. The operation is done by STA013 embedded software and it is transparent to the user.

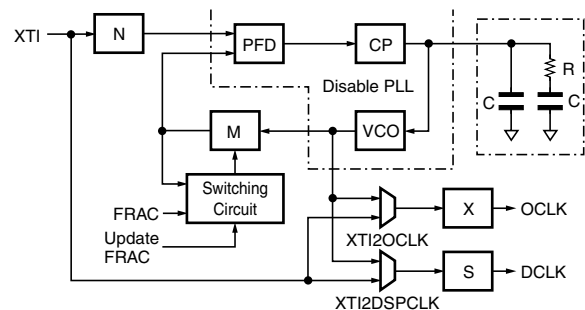
The STA013 PLL can drive directly most of the commercial DACs families, providing the VCO frequency with a software programmable dividers.



**Fig. 2 MPEG Decoder Interfaces**



**Fig. 3 Serial Input Interface Clocks**



**Fig. 4 PLL and Clock Generation System**

## CIRCUIT DESCRIPTION (MP3)

### ● PCM output Interface

The decoded audio data are output in serial PCM format. The interface consists of the following signals.

ADO            PCM Serial data Output  
 SCKT          PCM Serial Clock output  
 LRCLK        Left/right Channel selection Clock

The output samples precision is selectable from 16 to 24 bits/word, by setting the output precision with PCMCONF (16, 18, 20 and 24 bits mode) register. Data can be output either with the most significant bit first (MS) or least significant bit first (LS), selected by writing into a flag of the PCM-CONF register.

Figure 5 gives a description of the several STA013 PCM Output Formats.

The sample rates set decoded by STA013 is described Table 1.

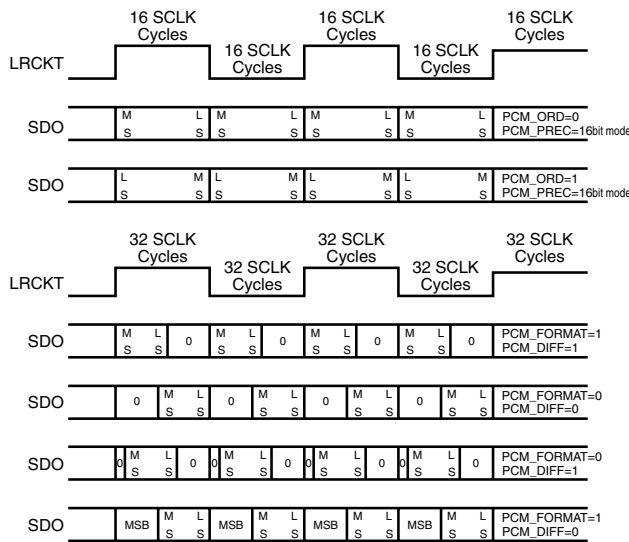


Fig. 5 PCM output Formats

MPEG 1	MPEG 2	PMPEG 2.5
48	24	12
44.1	22.05	11.025
32	16	8

Table 1 MPEG Sampling rates (kHz)

### ● STA013 Operation Mode

The STA013 can work in two different modes, called Multimedia Mode and Broadcast Mode.

In Multimedia Mode, STA013 decodes the incoming bit-stream, acting as a master of the data communication from the source to itself.

This control is done by a specific buffer management, controlled by STA013 embedded software.

The data source, by monitoring the DATA\_REQ line, send to STA013 the input data, when the signal is high (default configuration).

The communication is stopped when the DATA\_REQ line is low.

In this mode the fractional part of the PLL is disabled and the audio clocks are generated at nominal rates. Fig. 9 describes the default DATA\_REQ signal behaviour.

Programming STA013 it is possible to invert the polarity of the DATA\_REQ line (register REQ\_POL).

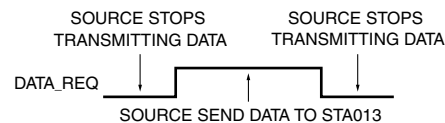


Fig. 6

In Broadcast Mode, STA013 works receiving a bitstream with the input speed regulated by the source. In this configuration the source has to guarantee that the bitrate is equivalent to the nominal bitrate of the decoded stream.

To compensate the difference between the nominal and the real sampling rates, the STA013 embedded software controls the fractional PLL operation. Portable or Mobile applications need normally to operate in Broadcast Mode.

In both modes the MPEG Synchronisation is automatic and transparent to the user. To operate in Multimedia mode, the STA013, pin nr. 8, SCR-INT must be connected to VDD on the application board.

### ● STA013 Decoding States

There are three different decoder states: Idle, Init, and Decode. Commands to change the decoding states are described in the STA013 I<sup>2</sup>C registers description.

#### • Idle Mode

In this mode the decoder is waiting for the RUN command. This mode should be used to initialise the configuration register of the device. The DAC connected to STA013 can be initialised during this mode (set MUTE to 1).

PLAY	MUTE	Clock State	PCM Output
X	0	Not Runnig	0
X	1	Runnig	0

# KDC-MP6090R/MP7018/MP8017

## CIRCUIT DESCRIPTION (MP3)

### • Init Mode

“PLAY” and “MUTE” changes are ignored in this mode. The internal state of the decoder will be updated only when the decoder changes from the state “init” to the state “decode”. The “init” phase ends when the first decoded samples are at the output stage of the device.

### • Decode Mode

This mode is completely described by the following table.

PLAY	MUTE	Clock State	PCM Output	Decoding
0	0	Not Running	0	No
0	1	Running	0	No
1	0	Running	Decoded Samples	Yes
1	1	Running	0	Yes

## ■ I<sup>2</sup>C BUS SPECIFICATION

The STA013 supports the I<sup>2</sup>C protocol. This protocol defines any device that sends data on to the bus as a transmitter and any device that reads the data as a receiver. The device that controls the data transfer is known as the master and the others as the slave. The master always starts the transfer and provides the serial clock for synchronisation. The STA013 is always a slave device in all its communications.

## ● COMMUNICATION PROTOCOL

### • Data transition or change

Data changes on the SDA line must only occur when the SCL clock is low. SDA transition while the clock is high are used to identify START or STOP condition.

### • Start condition

START is identified by a high to low transition of the data bus SDA signal while the clock signal SCL is stable in the high state.

A START condition must precede any command for data transfer.

### • Stop condition

STOP is identified by low to high transition of the data bus SDA signal while the clock signal SCL is stable in the high state. A STOP condition terminates communications between STA013 and the bus master.

### • Acknowledge bit

An acknowledge bit is used to indicate a successful data transfer. The bus transmitter, either master or slave, releases the SDA bus after sending 8 bit of data. During the 9th clock pulse the receiver pulls the SDA bus low to acknowledge the receipt of 8 bits of data.

### • Data input

During the data input the STA013 samples the SDA signal on the rising edge of the clock SCL.

For correct device operation the SDA signal has to be stable during the rising edge of the clock and the data can change only when the SCL line is low.

## ● DEVICE ADDRESSING

To start communication between the master and the STA013, the master must initiate with a start condition. Following this, the master sends onto the SDA line 8 bits (MSB first) corresponding to the device select address and read or write mode.

The 7 most significant bits are the device address identifier, corresponding to the I<sup>2</sup>C bus definition. For the STA013 these are fixed as 100011.

The 8th bit (LSB) is the read or write operation RW, this bit is set to 1 in read mode and 0 for write mode. After a START condition the STA013 identifies on the bus the device address and, if a match is found, it acknowledges the identification on SDA bus during the 9th bit time. The following byte after the device identification byte is the internal space address.

## ● WRITE OPERATION (see Fig. 7)

Following a START condition the master sends a device select code with the RW bit set to 0.

The STA013 acknowledges this and waits for the byte of internal address.

After receiving the internal bytes address the STA013 again responds with an acknowledge.

### • Byte write

In the byte write mode the master sends one data byte, this is acknowledged by STA013. The master then terminates the transfer by generating a STOP condition.

### • Multibyte write

The multibyte write mode can start from any internal address. The transfer is terminated by the master generating a STOP condition.

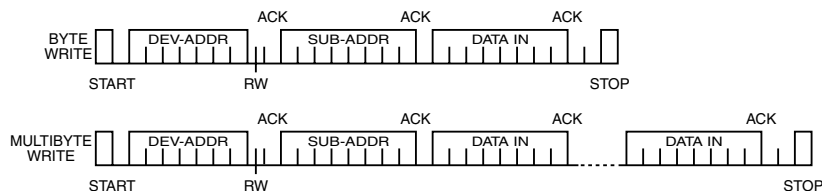


Fig. 7 Write Mode Sequence

## CIRCUIT DESCRIPTION (MP3)

### ● READ OPERATION (see Fig. 8)

#### • Current byte address read

The RTA013 has an internal byte address counter. Each time a byte is written or read, this counter is incremented. For the current byte address read mode, following a START condition the master sends the device address with the RW bit set to 1.

The STA013 acknowledges this and outputs the byte address by the internal byte address counter. The master does not acknowledge the received byte, but terminates the transfer with a STOP condition.

#### • Sequential address read

This mode can be initiated with either a current address read or a random address read. However in this case the master does not acknowledge the data byte output and the STA013 continues to output the next byte in sequence. To terminate the streams of byte the master does not acknowledge the last received byte, but terminates the transfer with a STOP condition.

The output data stream is from consecutive byte address, with the internal byte address counter automatically incremented after one byte output.

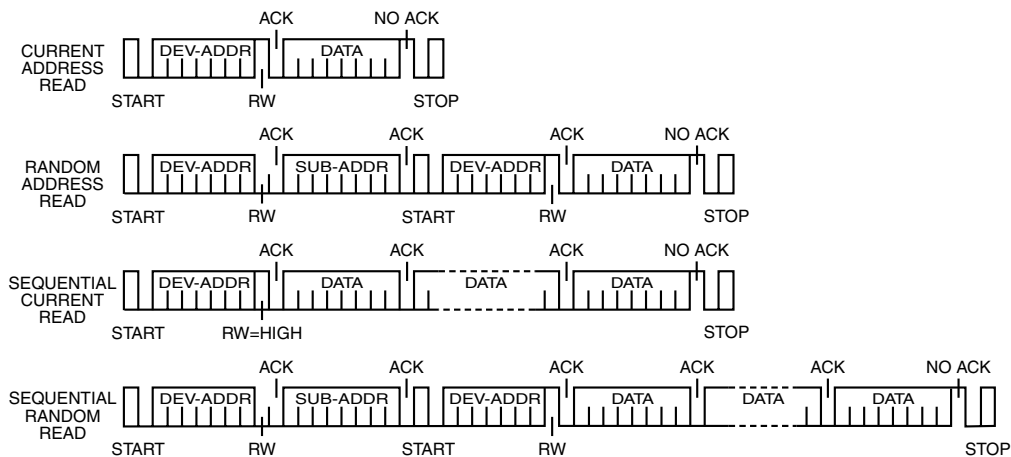
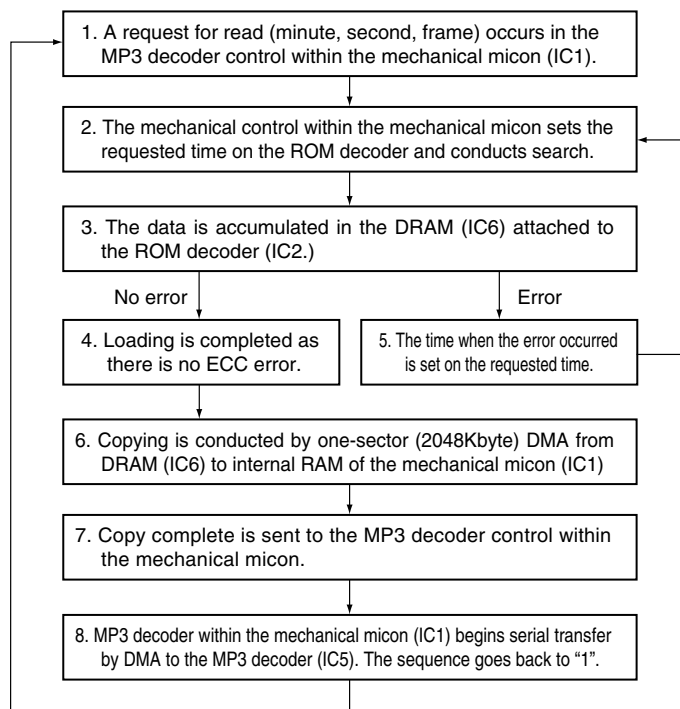


Fig. 8 Read Mode Sequence

### ■ MP3 Playing Procedure



## TEST MODE

### TEST MODE

#### 1. How to enter the test mode

While holding the FM and Preset 6 keys, reset the unit.

#### 2. How to exit from the test mode

While holding the Preset 6 key, reset the unit.

(Note) The test mode cannot be terminated by ACC OFF, power OFF or momentary power down.

#### 3. Initial status in the test mode

- Sources : ALL OFF
- Display : All segments are lit.
- Volume : -10 dB (displayed as "30")
- Loudness : OFF
- CRSC : OFF regardless of the presence of switching function.
- SYSTEM Q : Flat
- LED : White for no scanning. (VLCD model)

#### 4. Special display in Tuner mode

When any of the following messages is displayed in Tuner mode, the F/E may be abnormal.

- "TNE2P NG" : The EEPROM is set to the default (unstable values) because the F/E was shipped without passing through the adjustment process, etc.
- "TNCON NG" : Communication with the F/E is not possible.

#### 5. Forced switching of K3I

Each press of the Preset 6 key in Tuner mode should switch K3I from AUTO → Forced Wide → Forced Middle → Forced Narrow → AUTO.

The initial status is AUTO and the display shows these modes as follows.

- AUTO : FMA
- Forced Wide : FMW
- Forced Middle : FMM
- Forced Narrow : FMN

#### 6. Test mode specifications of the CD receiver

- Forced ejection is inhibited in the reset start operation. When the unit is reset while a CD is loaded in it, the CD is not recognized by resetting.
- Each press of the Track Up key jumps to the following track numbers:  
No. 9 → No. 15 → No. 10 → No. 11 → No. 12 → No. 13 → No. 14 → No. 9  
(The cycle restarts from here.)
- Each press of the Track Down key jumps to the previous track number to the track being played.

#### 7. Audio-related specifications

- A short press of the Q key initiates the audio adjustment mode.
- Pressing the \* key on the remote initiates the audio adjustment mode.
- Continuous holding of a remote control key is inhibited.
- Bass, Middle and Treble are adjusted in 3 steps of

Min/Center/Max with the Track Up/Down keys.

- Balance is adjusted in 3 steps of Left Max/Center/Right Max with the Track Up/Down keys.
- Fader is adjusted in 3 steps of Rear Max/Center/Front Max with the Track Up/Down keys.
- HPF is adjusted in 2 steps of Through/220 Hz with the Track Up/Down keys.
- LPF is adjusted in 2 steps of Through/120 Hz with the Track Up/Down keys.
- Bass f, Bass Q, Bass EXT, Middle f, Middle Q and Treble f are not dealt with by the audio adjustment.

#### 8. Menu-related specifications

- A short press of the CLK key initiates the Menu mode.
- Pressing the DNPP/SBF key on the remote initiates the Menu mode.
- Continuous holding of a remote control key is inhibited.
- Calendar adjustment, calendar display switching and calendar memo are eliminated from the targets of continuous key holding. (FL model)
- In the color adjustment mode, pressing the Preset 1 key sets Red, 2 sets Blue, 3 sets Green and 4 sets Green. (VLCD model)
- Contrast is adjusted in 3 steps of 0/5/10 and the default is 5. (VLCD/LCD model)
- Brightness is adjusted in 3 steps of 0/5/10 and the default is 10. (Normal FL model)

#### 9. Backup current measurement

When the unit is reset while ACC is OFF (i.e. by turning Backup ON), the MUTE terminal goes OFF in 2 seconds in place of 15 second. (The panel, CD mechanism and TAPE mechanism are not activated at this time.)

#### 10. Special display when the display is all on

Pressing the Preset keys while the power is ALL OFF displays the following information.

[PRESET 1]	Version display (8 digits, Month/Day/Hour/Minute) (Display) SYS xxxxxxxx System microcomputer PAN xxxxxxxx Panel microcomputer
[PRESET 2]	Serial No. display (8 digits) (Note) CD/RK type eXcelon model (Display) S. No. xxxxxxxx
[PRESET 3]	Short press : View power ON time. (The All OFF period is not counted.) Long press/hold : Clear power ON time. (Display) PonTim xxxxx Max. 65535 (hours)
[PRESET 4]	Short press : Display TAPE/CD/MD operation time. Long press/hold : Clear TAPE/CD/MD operation time (Display) CDTime xxxxx (CD/R) TapTim xxxxx (C/R) Max. 65535 (hours)
[PRESET 5]	Short press : Display TAPE/CD/MD ejection count. Long press/hold : Clear TAPE/CD/MD ejection count. (Display) EjeTim xxxxx Max. 65535 (times)
[PRESET 6]	Short press : Display Panel open/close count. Long press/hold : Clear Panel open/close count. (Display) PnCnt xxxxx Max. 655350 (times)



## TEST MODE

### 11. Other specifications

- Automatic panel closing when a tape/CD is inserted is inhibited. (M&T model)
- Panel operation by turning power OFF/ON is inhibited. (M&T model)
- Messages such as "CODE OFF" are not displayed when power is turned ON.
- Pressing the ATT key opens or closes the panel. (M&T model)
- Pressing the TI (AUTO) key during changer operation turns 2zone ON. 2zone can be turned OFF by pressing the TI (AUTO) key again. The P/S dot lights while 2zone is ON.
- Pressing and holding the CLK key for a second in the ALL OFF status the Mask Key (security) write mode.

### • Security-related information

#### 1. Forced Power ON mode (All models)

Even when the security (Mask key) is approved, resetting the unit while holding the ATT and Preset 4 keys makes it possible to turn the power ON for 30 minutes. After 30 minutes have elapsed, it is not possible to return to the previous condition unless the unit is reset again.

#### 2. Method of registration of the security code after EEPROM (Tuner Unit Ass'y) replacement (Code security model)

- (1) Enter the test mode. (See " 1. How to enter the test mode")
- (2) Press the CLK key to enter the security registration mode.
- (3) Enter the code using the Preset 1/2/3/4 keys.  
Example: To enter "3510"
  - Press the Preset 1 key 4 times.
  - Press the Preset 2 key 6 times.
  - Press the Preset 3 key twice.
  - Press the Preset 4 key once.
- (4) Press and hold the DISP key for 3 seconds until "APPROVED" is displayed.
- (5) Exit from the test mode. (See " 2. How to exit from the test mode")

(Note) All Clear is not applicable to the security code of this model.

#### 3. Simplified method of clearing the security code (K Type only)

- (1) While the code entry is requested, press and hold the VOL UP key for 3 seconds while holding the DISP key pressed. (This should turn "----" off.)
- (2) Enter "KCAR" from the remote. (Same way as the 00 model)  
Press the 5 key on the remote twice, then press the Track Up key. (This enters "K".)  
Press the 2 key on the remote 3 times, then press the Track Up key. (This enters "C".)  
Press the 2 key on the remote once, then press the Track Up key. (This enters "A".)  
Press the 7 key on the remote twice, then press the Track Up key. (This enters "R".)

(3) The security code is cleared and the unit enters the ALL OFF mode.

(4) If you commit a mistake in the code entry, the unit enters the code request mode again.

#### 4. Method of writing the Mask key while the EEPROM is in the initial status

- (1) Enter the test mode. (See " 1. How to enter the test mode")
  - (2) Press the CLK key to enter the Mask key registration mode. "TRANSMIT1" should be displayed now. The display at this time should show " < > " in place of " [ ] ".
  - (3) Point the Mask key remote toward the light sensor, and press and hold its key for more than 0.5 second.
  - (4) When "TRANSMIT2" is displayed, press and hold the key on the Mask key remote for more than 0.5 second again. The first and second counter codes are not compared at this time.
  - (5) When "APPROVED" is displayed, the write operation is complete. Now the demonstration mode is initiated and the test mode is terminated.
- (Note) In the same way as previous models, if 30 minutes have elapsed with no code written, an error occurs and the power is turned OFF.

#### 5. Method of initializing the Mask key

(How to reset the unit from the Mask key approved condition to the factory condition)

- (1) Enter the test mode. (See " 1. How to enter the test mode")
- (2) "TRANSMIT1" is displayed and the Mask key entry request mode is initiated.  
The display at this time should show " \* \* " in place of " [ ] ".
- (3) Press and hold the key on the Master key remote for more than 3 seconds.
- (4) When "TRANSMIT2" is displayed, press and hold the key on the Master key remote for more than 3 seconds again.
- (5) When "APPROVED" is displayed, the Mask key is cleared, the demonstration mode is initiated, the test mode is terminated and the unit returns to the factory condition.

#### 6. Method of clearing all Mask key-related data

- (1) Enter the test mode. (See " 1. How to enter the test mode")
- (2) Press the CLK key to enter the Mask key registration mode. "TRANSMIT1" should be displayed now.
- (3) Point the Master key remote toward the light sensor, and press and hold its key for more than 3 seconds (until the level display shows the full condition).
- (4) When "TRANSMIT2" is displayed, hold the key on the Mask key remote for more than 3 seconds again. If "TRANSMIT1" is displayed in place of "TRANSMIT2", restart the procedure from step (3).
- (5) When "APPROVED" is displayed, all security data is cleared and the unit returns to the condition before Mask key writing with the EEPROM in the initial status.

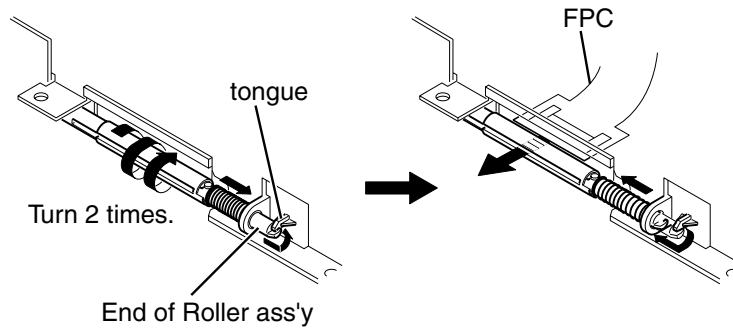
## ATTENTION

assembly of FPC(Flexible PC board) onto Roller ass'y

Turn Roller ass'y by 2 times.

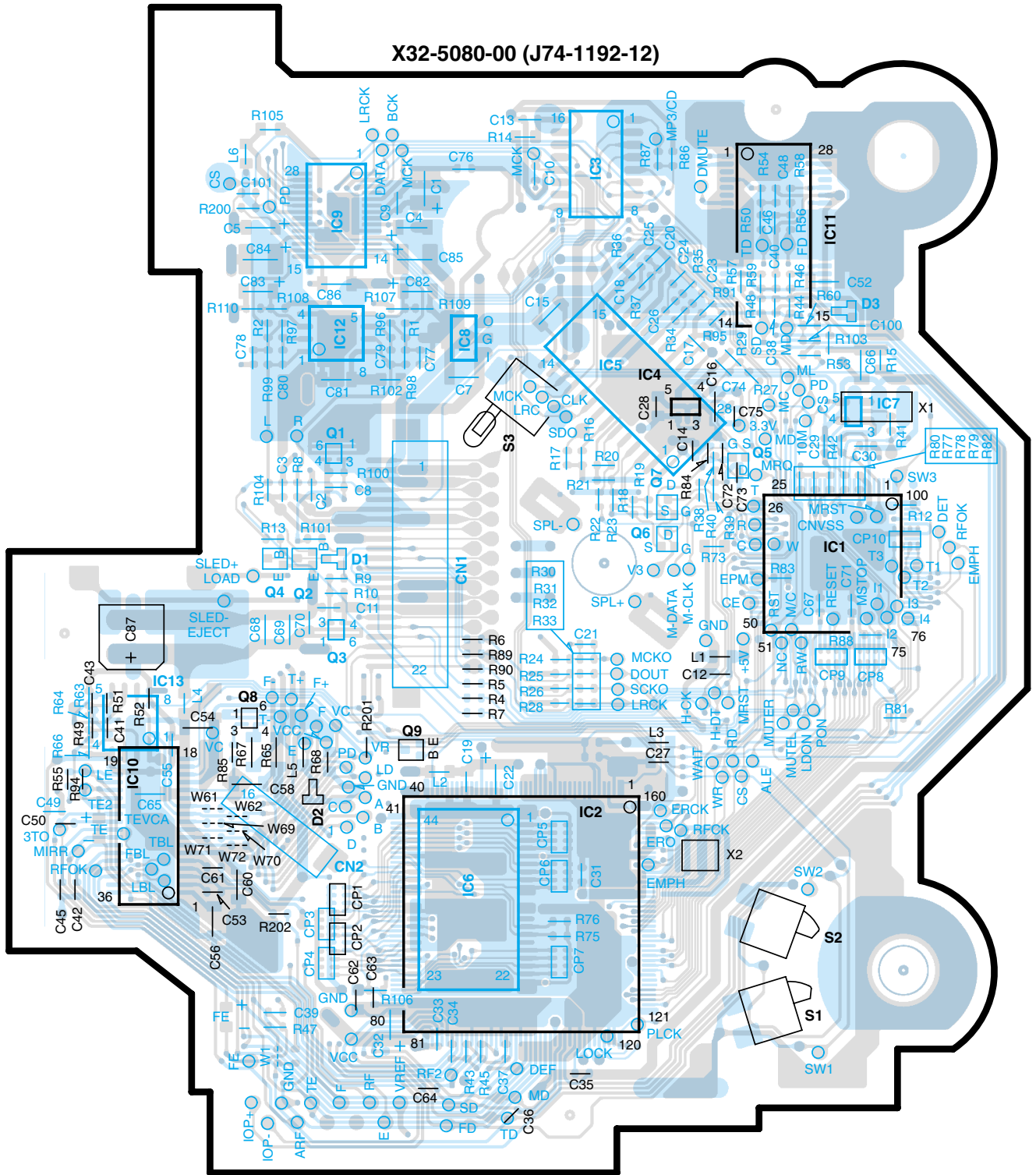
Hook the end of Roller ass'y to the tongue.

Insert the FPC into the slit of Roller ass'y then release the end of Roller ass'y and the tongue.



# PC BOARD (COMPONENT SIDE VIEW)

X32-5080-00 (J74-1192-12)

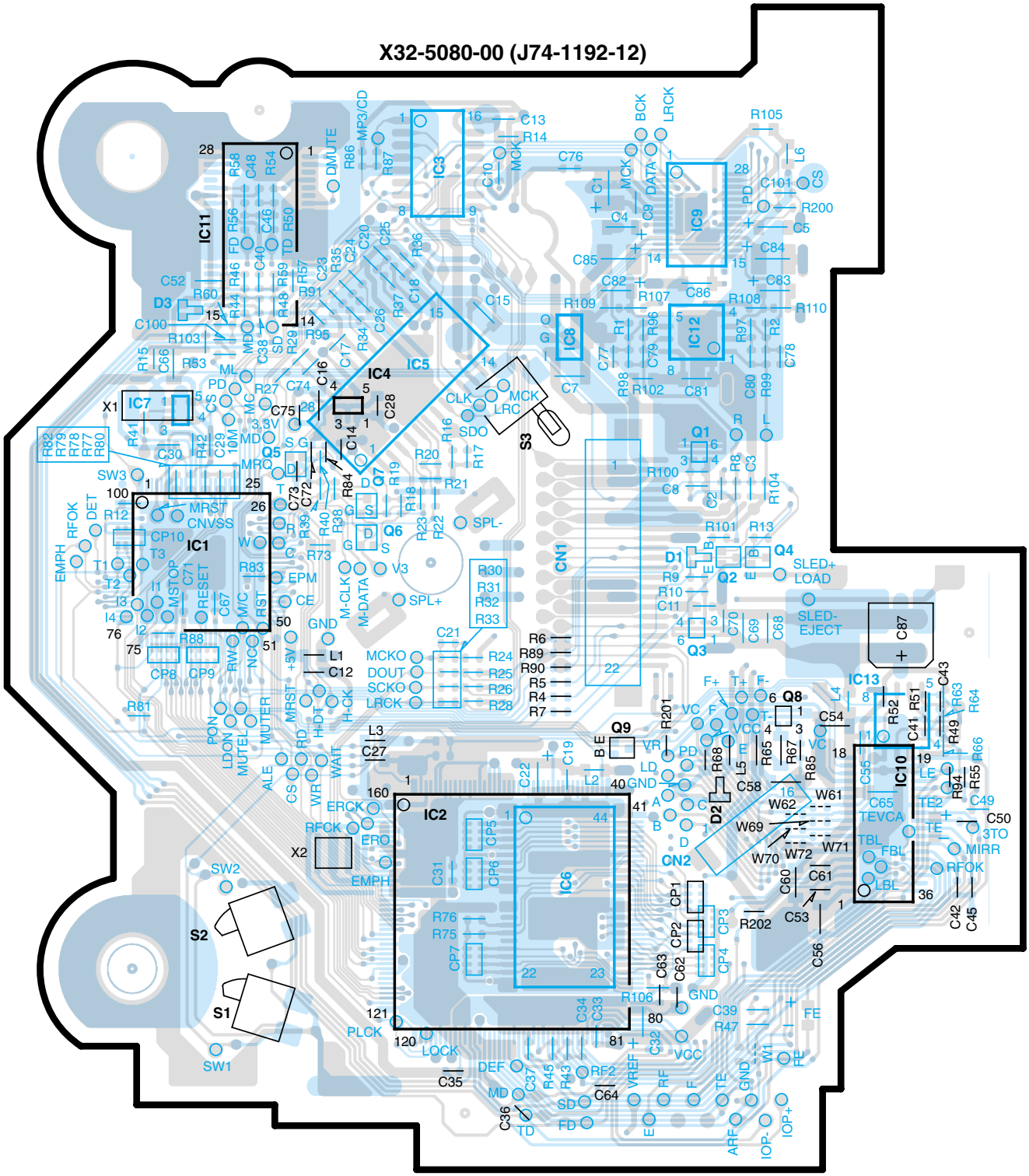


X32-5080-00

IC	1	2	3	4	5	6	7	8	9	10	11	12	13									
Q														1	2	3	4	5	6	7	8	9
Address	4D	5C	2C	3D	3C	5C	3E	3C	2B	5A	2D	3B	4A	3B	4B	4B	4B	3D	4D	3D	4B	4C

# PC BOARD (FOIL SIDE VIEW)

X32-5080-00 (J74-1192-12)

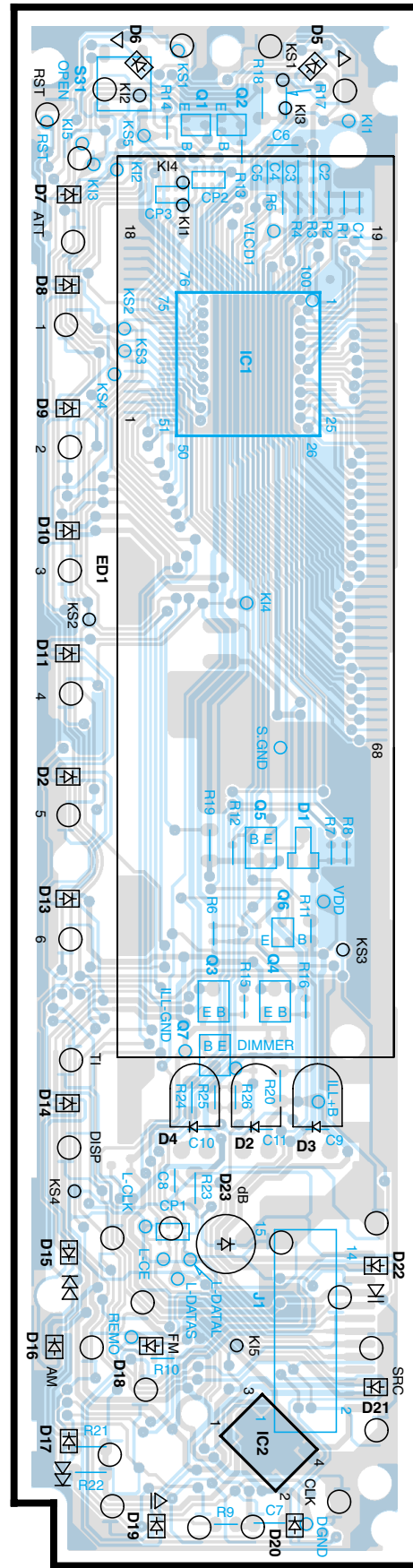


X32-5080-00

IC	1	2	3	4	5	6	7	8	9	10	11	12	13										
Q															1	2	3	4	5	6	7	8	9
Address	4G	5H	2H	3H	3C	5H	3G	3H	2I	5J	2G	3I	4J	3I	4I	4I	4I	3G	4H	3H	4I	4I	

# PC BOARD (COMPONENT SIDE VIEW)

X13-9960-11 (J74-1138-12)



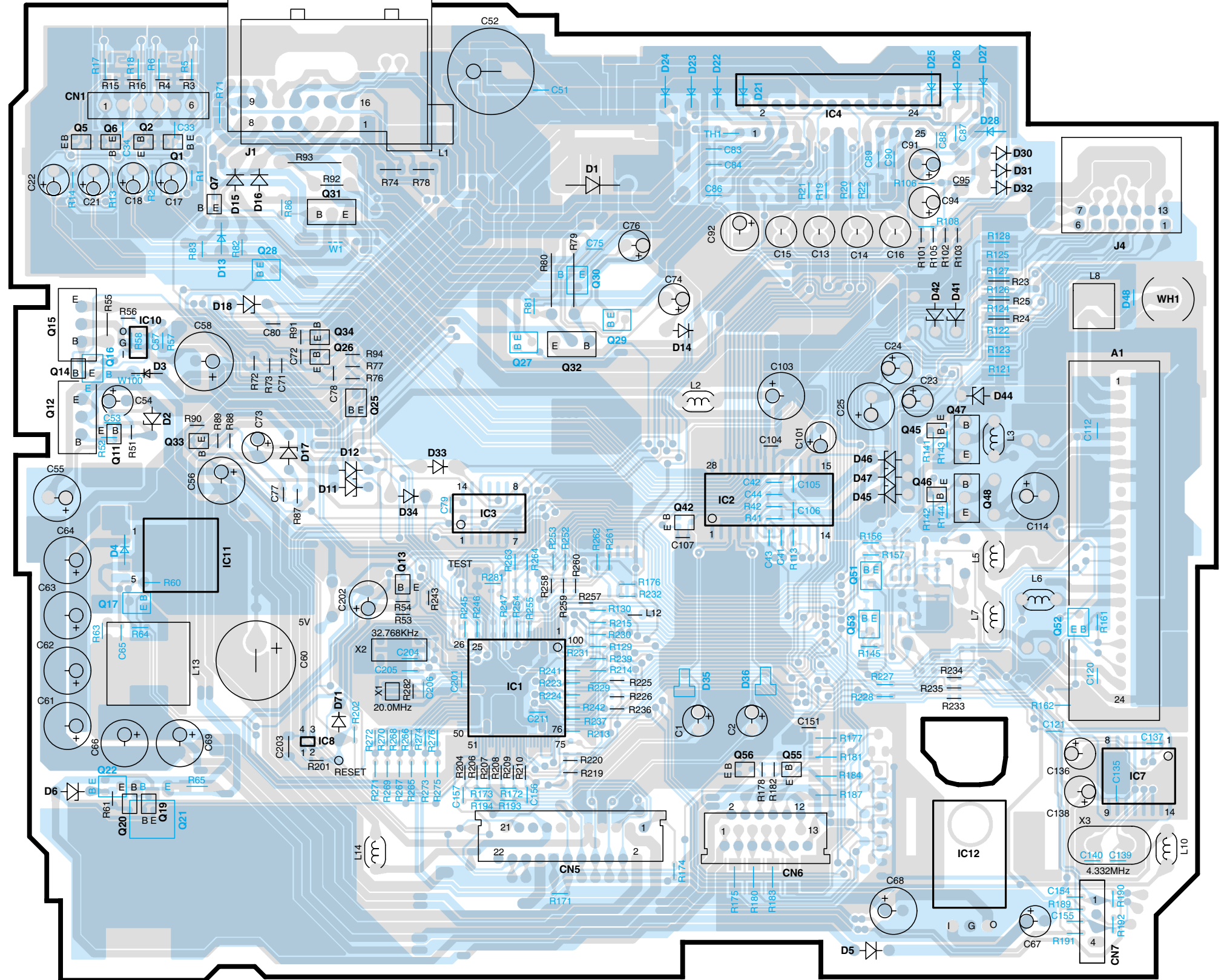
X25-880X-XX

IC	Q
1	5P
2	4Q
3	4P
4	2R
5	5T
6	5O
7	3N
8	4O
9	6S
10	2N
11	2N
12	2N
13	4N
14	4P
15	3N
16	3N
17	5N
18	6N
19	6N
20	6N
21	6N
22	5N
25	3O
26	3O
27	3P
28	3O
29	3Q
30	3Q
31	2O
32	3P
33	4N
34	3O
42	4Q
45	4R
46	4R
47	4S
48	4S
51	4R
52	5S
53	5R
55	5R
56	5Q

X13-9960-11

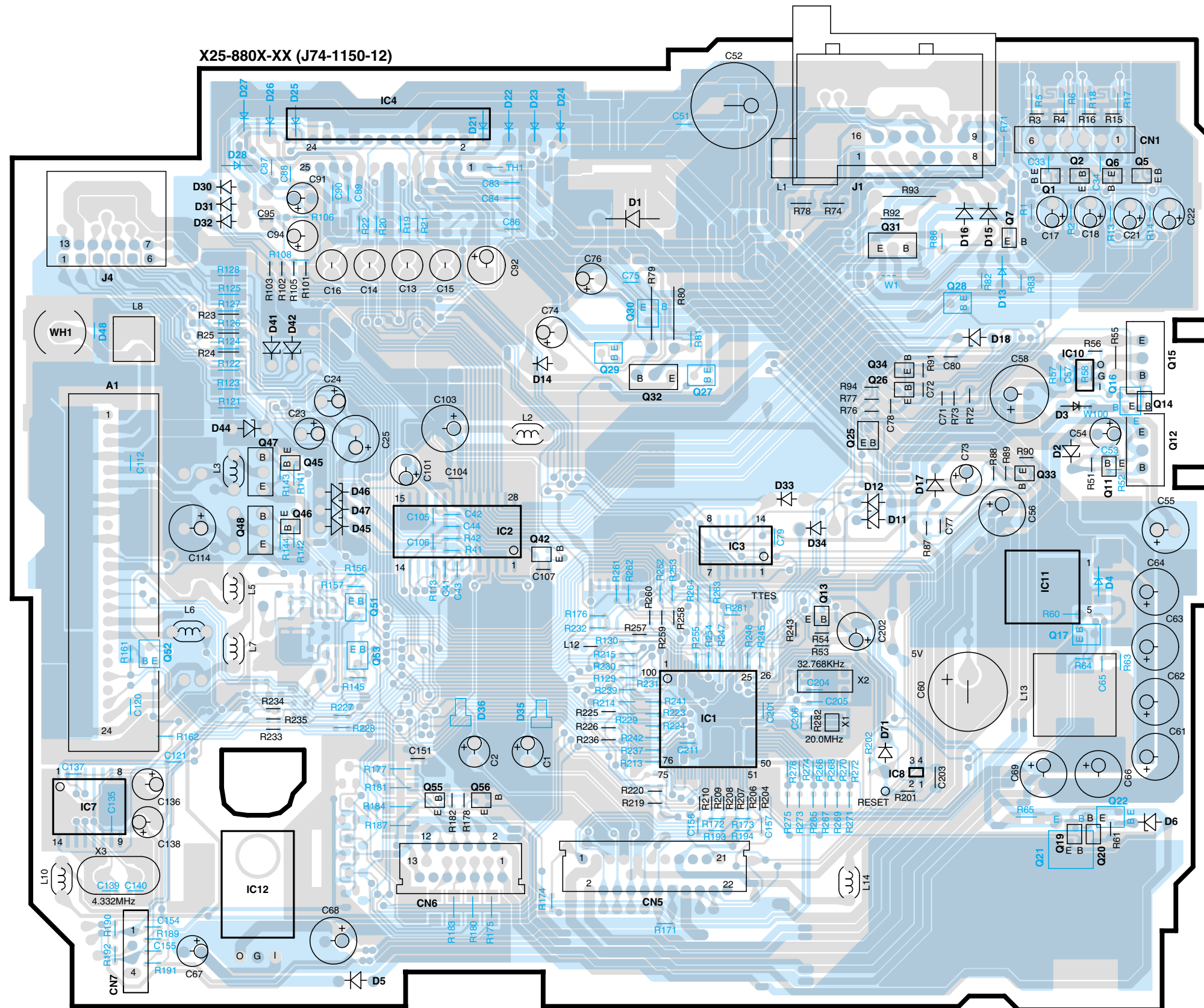
IC	Q
1	3L
2	7L
	2L
	5L
3	5L
4	5L
5	4L
6	5L
7	5L

X25-880X-XX (J74-1150-12)



Refer to the schematic diagram for the values of resistors and capacitors.

# PC BOARD (FOIL SIDE VIEW)



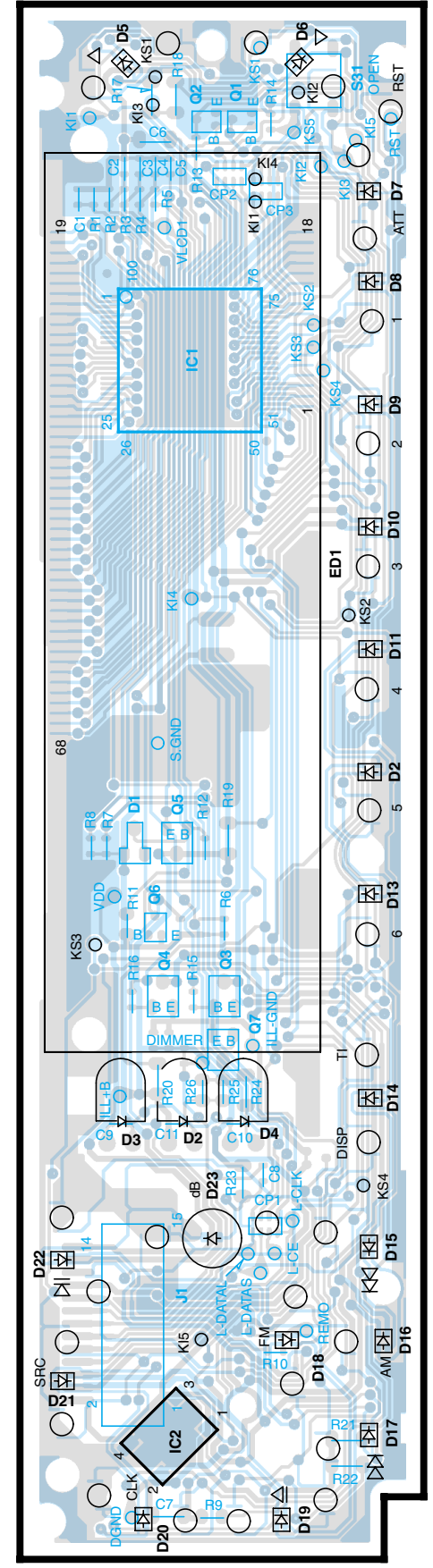
**X25-880X-XX**

IC	Q
1	5Y
2	4X
3	4Y
4	2W
7	5U
8	5Z
10	3AA
11	4AA
12	6V
2	2AA
5	2AA
6	2AA
7	2AA
11	4AA
12	4AA
13	4Y
14	3AA
15	3AA
16	3AA
17	5AA
19	6AA
20	6AA
21	6AA
22	5AA
25	3Z
26	3Z
27	3Y
28	3Z
29	3X
30	3X
31	2Z
32	3Y
33	4AA
34	3Z
42	4X
45	4W
46	4W
47	4V
48	4V
51	4W
52	5V
53	5W
55	5W
56	5X

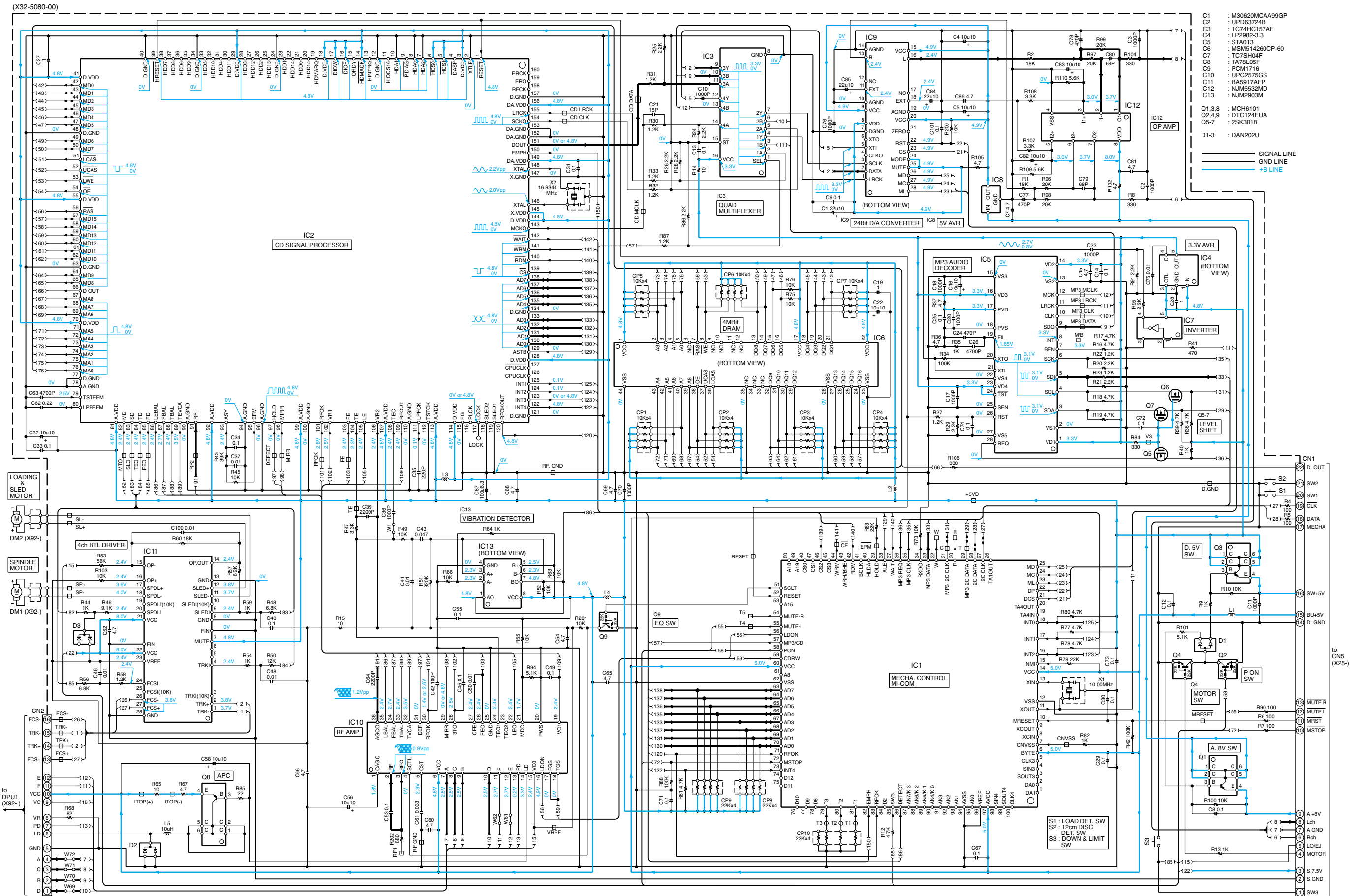
**X13-9960-11**

IC	Q
1	3AC
2	7AC
3	2AD
4	5AD
5	4AC
6	5AC
7	5AD

**X13-9960-11 (J74-1138-12)**



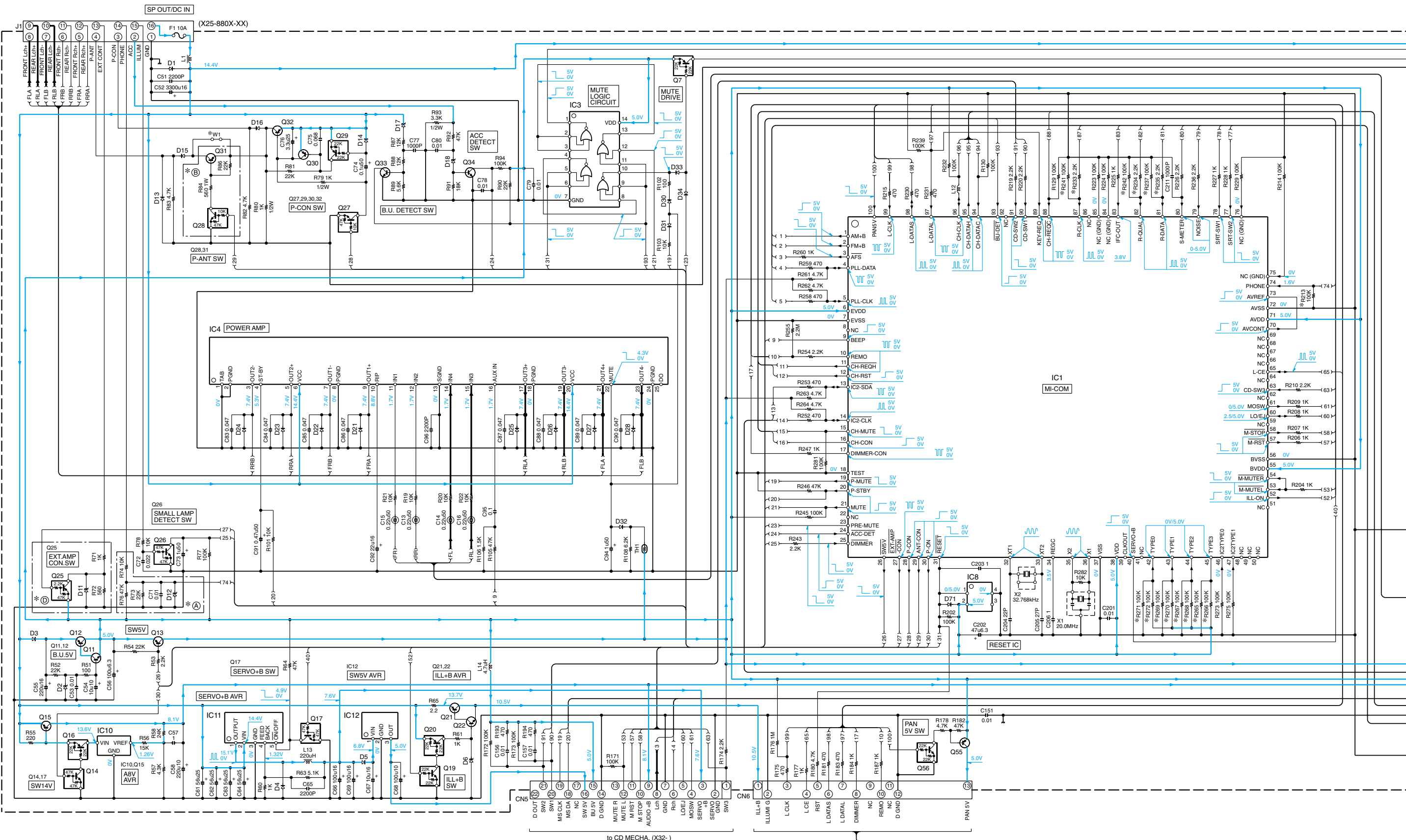
Refer to the schematic diagram for the values of resistors and capacitors.



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  
 ▲ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.  
 • DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

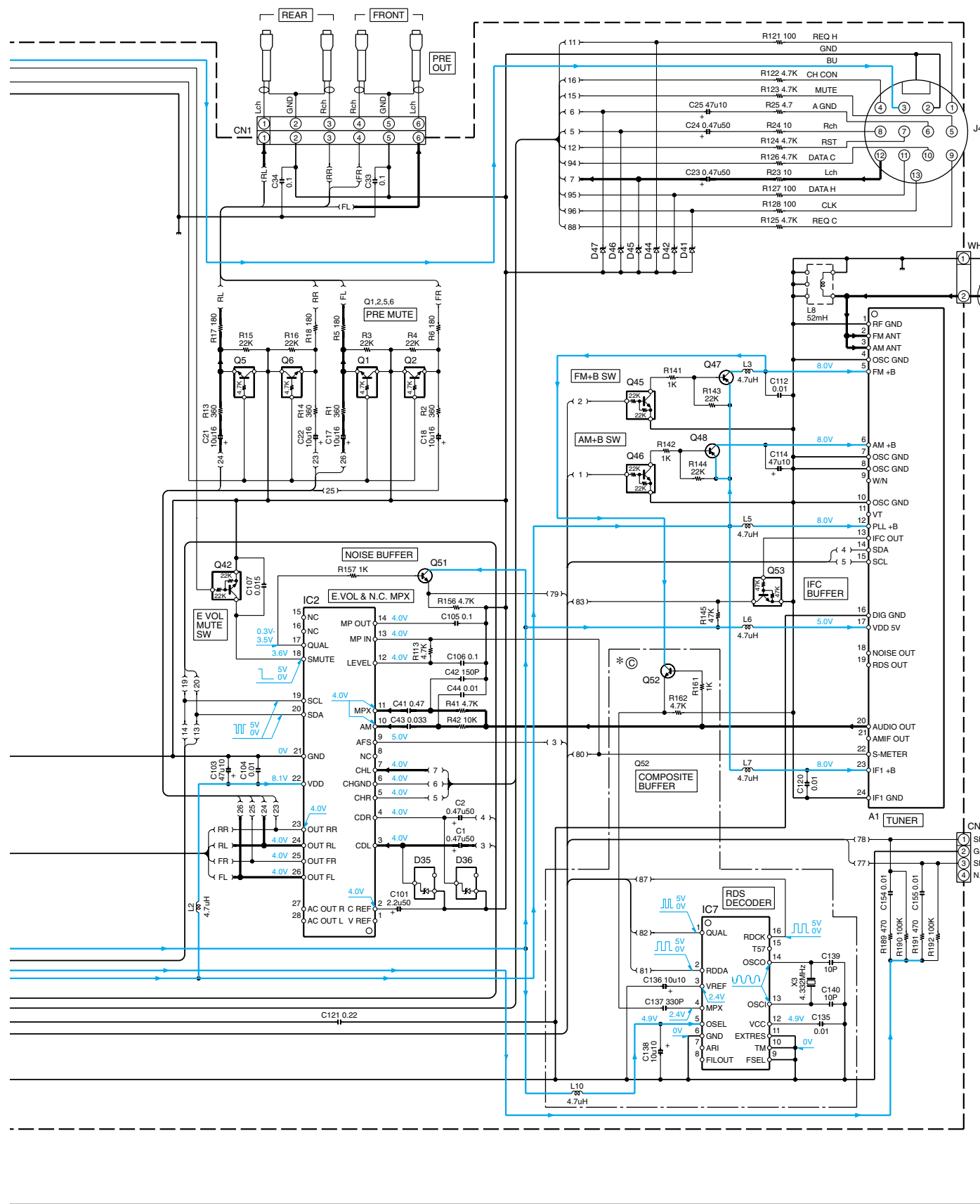
1  
2  
3  
4  
5  
6  
7

to CN5 (X25)



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  
 ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.  
 • DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.





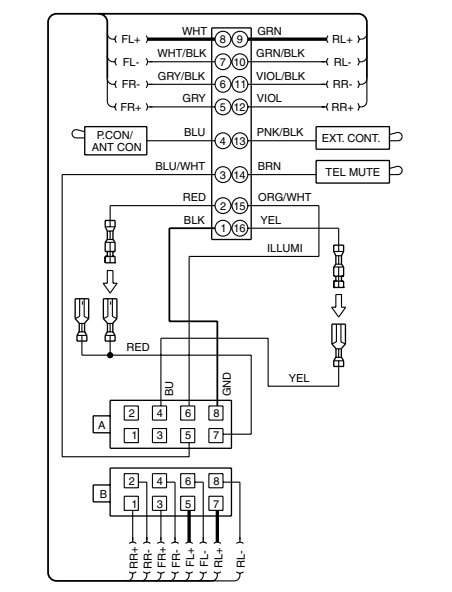
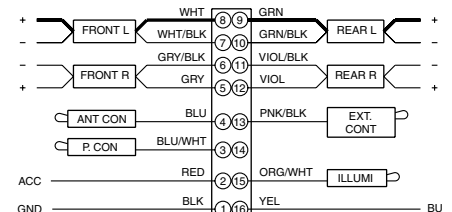
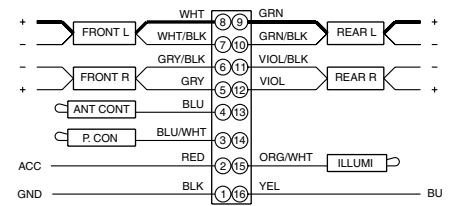
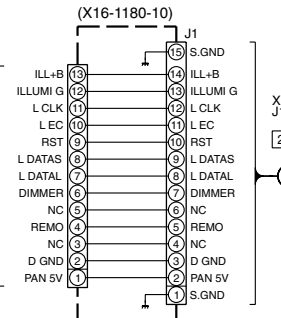
(X25-880X-XX)

MODEL NAME	UNIT No.	(A)	(C)	(B)	(D)
KDC-MP8017	0-10	NO	YES	NO	NO
KDC-MP7018	0-21	NO	YES	YES	YES
KDC-MP6090R	2-71	YES	NO	NO	YES

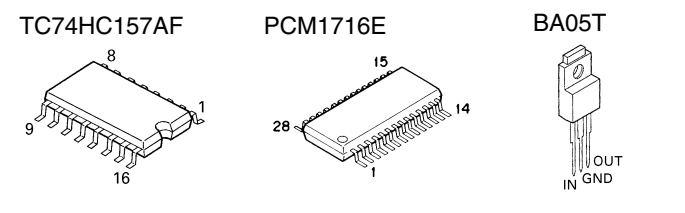
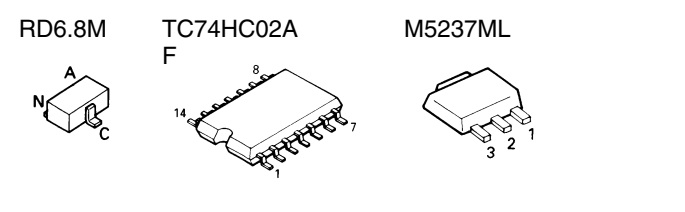
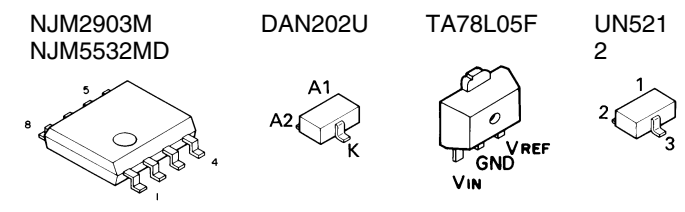
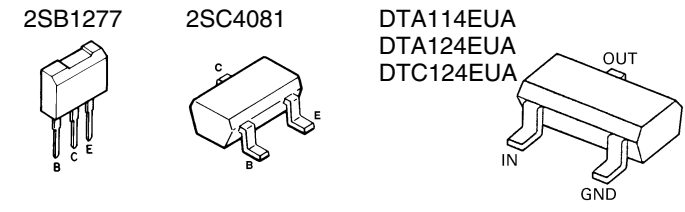
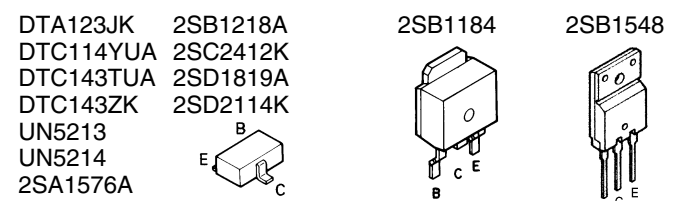
MODEL NAME	R213,237	R233	R265, 267,269	R271	R272	W1
KDC-MP8017	YES	NO	YES	NO	NO	NO
KDC-MP7018	YES	NO	NO	YES	NO	NO
KDC-MP6090R	NO	YES	NO	YES	YES	NO

MODEL NAME	R266	R271	R272	W1
KDC-MP8017	NO	NO	YES	NO
KDC-MP7018	YES	YES	NO	NO
KDC-MP6090R	YES	NO	YES	YES

- IC1 : UPD703033AGC057
  - IC2 : TDA7407D
  - IC3 : HD74HC02FP or TC74HC02AF
  - IC4 : TA8263BH
  - IC7 : TDA7479D
  - IC8 : S-80837ANNP
  - IC10 : M5237ML
  - IC11 : LM2595S-ADJ
  - IC12 : BA05T
- Q1,2,5,6 : KRC410 or DTC143TUA
  - Q7,16,20,29 : KRA303 or DTA124EUA
  - Q11,22,33,34,51,52 : 2SC4081 or 2SD1819A
  - Q12,15 : 2SB1548(P)
  - Q13,30,55 : 2SA1576A or 2SB1218A
  - Q14,17,26,53 : UN5213 or DTC144EUA
  - Q19,42,45,46,56 : UN5212 or DTC124EUA
  - Q21 : 2SB1184
  - Q25 : KRA105S or DTA123JK
  - Q27,28 : UN5214 or DTC114YUA
  - Q31,32,47,48 : 2SB1277(Q,R)
- D1 : RM10ZLF
  - D2,17 : MA4056(N)-M
  - D3 : RB160L-40
  - D4 : U1GWJ44
  - D5,15,16 : AM01Z or DSM1SD2 or ERA15-02
  - D6 : MA4110-L or HZS11B2
  - D11 : MA4056-M or HZS6B1
  - D12 : MA4047-M or HZS5B1
  - D13,21-28 : 1SR154-400
  - D14,30-34,71 : 1SS133
  - D18 : MA4062(N)-M
  - D35,36 : RD6.8M(B2)
  - D41,42,44 : MA4062-L or HZS6C1
  - D45-47 : MA4068(N)-M

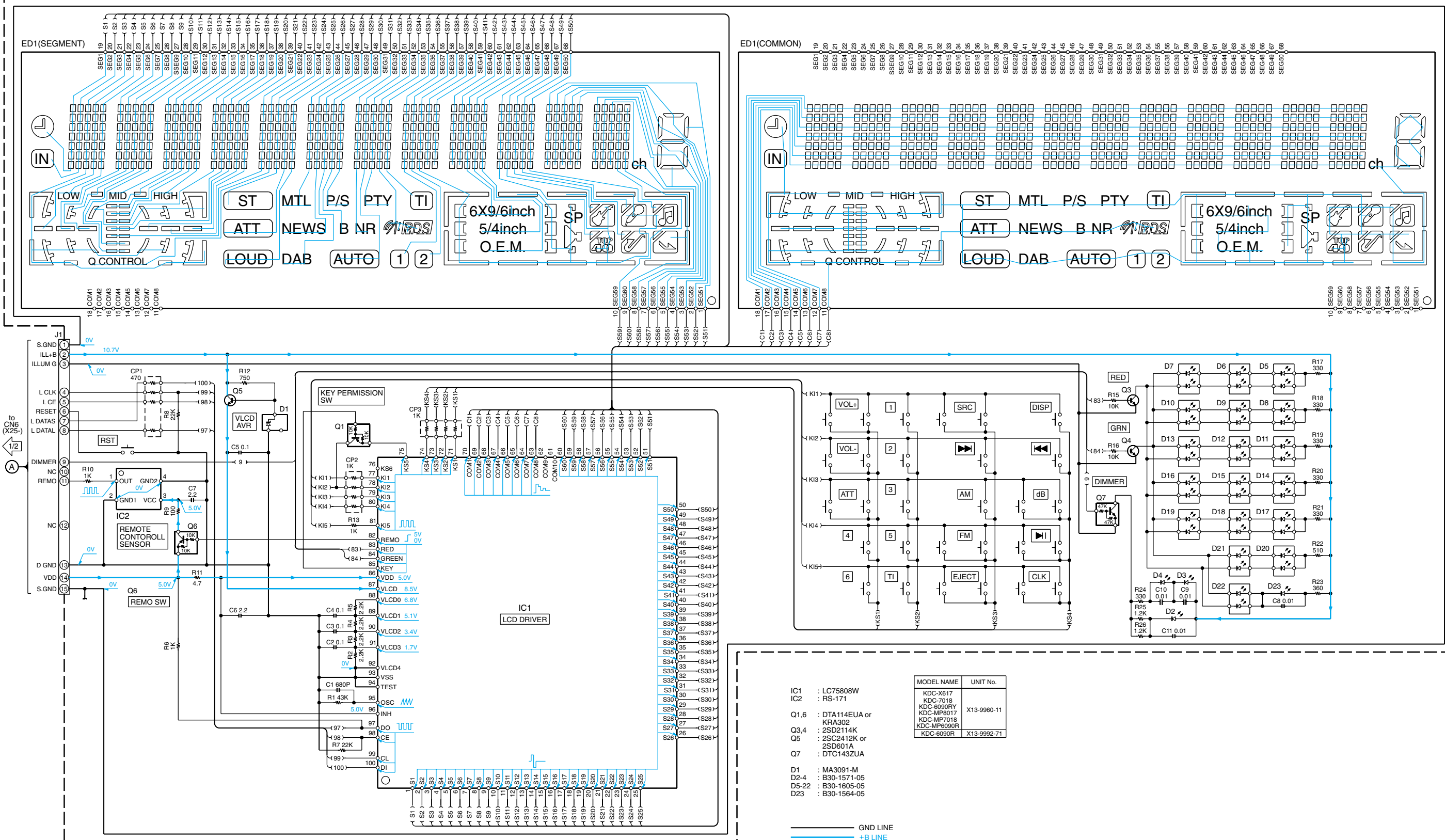


DC CORD (E30-4943-05) KDC-MP6090R



KDC-MP6090R/MP7018  
KDC-MP8017

KENWOOD



- | MODEL NAME  | UNIT No.    |
|-------------|-------------|
| KDC-X617    | X13-9960-11 |
| KDC-7018    |             |
| KDC-6090RY  |             |
| KDC-MP8017  |             |
| KDC-MP7018  | X13-9992-71 |
| KDC-MP6090R |             |
- IC1 : LC75808W
  - IC2 : RS-171
  - Q1,6 : DTA114EUA or KRA302
  - Q3,4 : 2SD2114K
  - Q5 : 2SC2412K or 2SD601A
  - Q7 : DTC143ZUA
  - D1 : MA3091-M
  - D2-4 : B30-1571-05
  - D5-22 : B30-1605-05
  - D23 : B30-1564-05

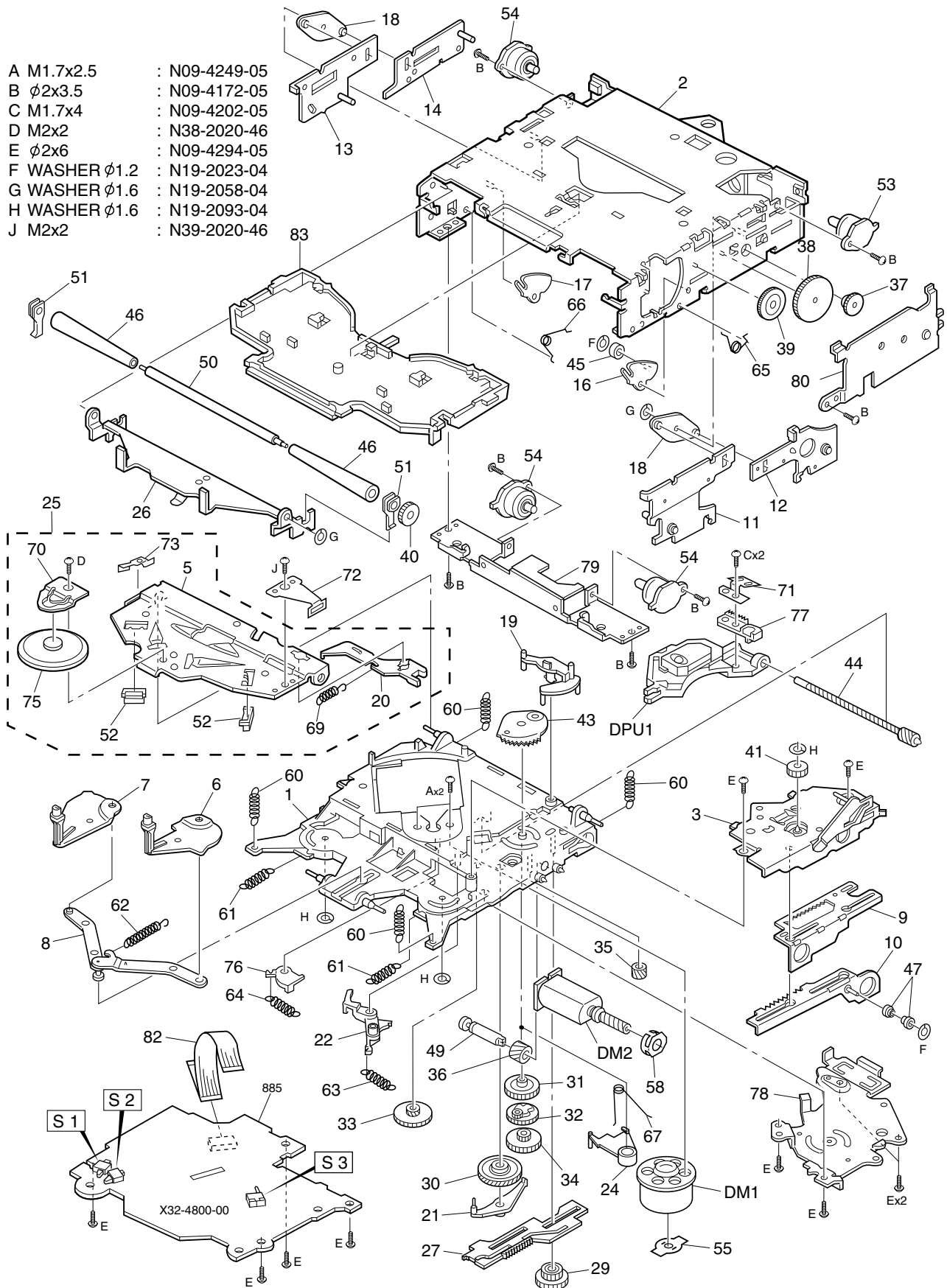
**CAUTION :** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  
 ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.  
 • DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

KDC-MP6090R/MP7018  
KDC-MP8017

KENWOOD

## EXPLODED VIEW (MECHANISM)

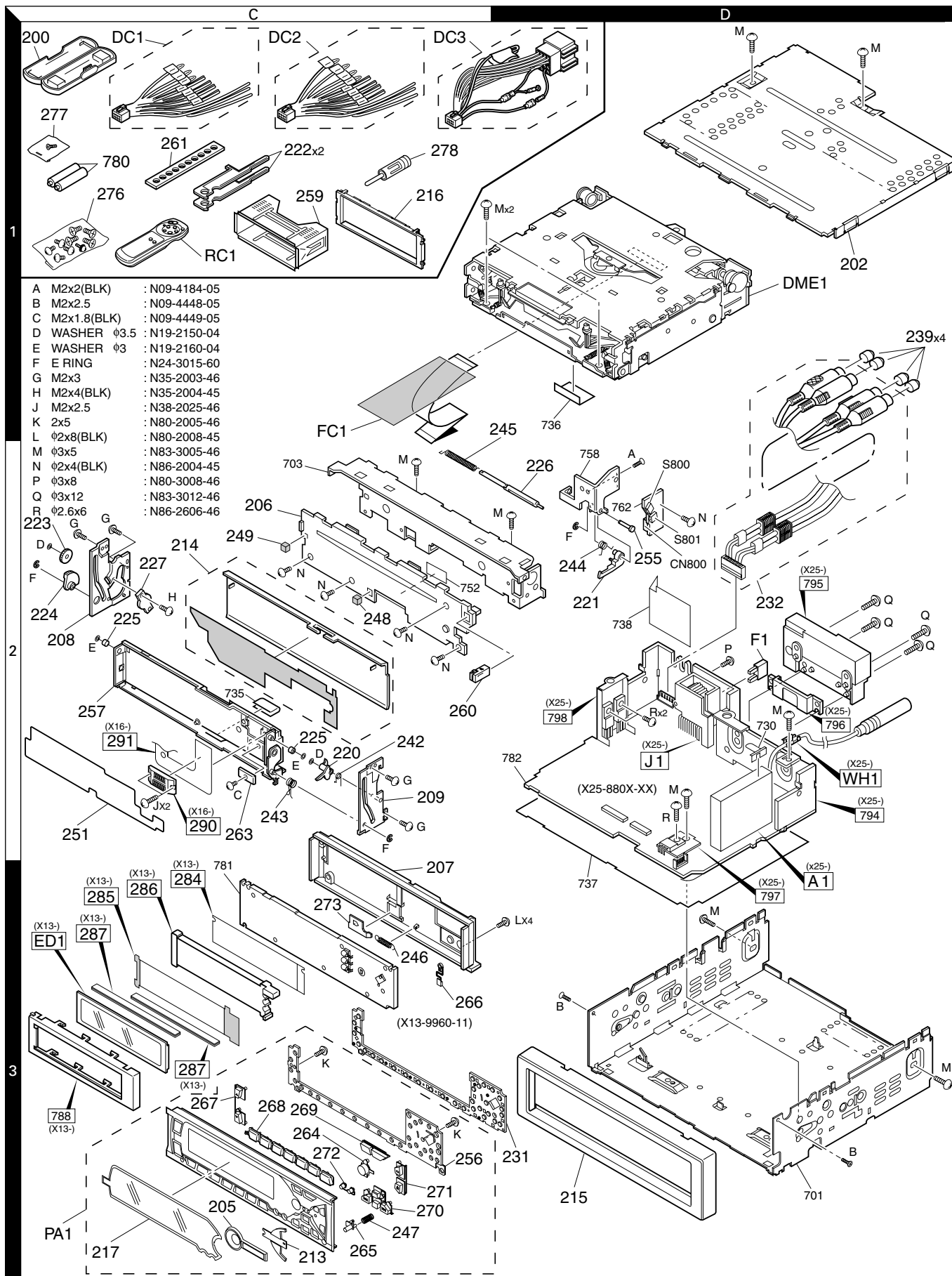
- |   |             |   |             |
|---|-------------|---|-------------|
| A | M1.7x2.5    | : | N09-4249-05 |
| B | φ2x3.5      | : | N09-4172-05 |
| C | M1.7x4      | : | N09-4202-05 |
| D | M2x2        | : | N38-2020-46 |
| E | φ2x6        | : | N09-4294-05 |
| F | WASHER φ1.2 | : | N19-2023-04 |
| G | WASHER φ1.6 | : | N19-2058-04 |
| H | WASHER φ1.6 | : | N19-2093-04 |
| J | M2x2        | : | N39-2020-46 |



Parts with the exploded numbers larger than 700 are not supplied.

# KDC-MP6090R/MP7018/MP8017

## EXPLODED VIEW (UNIT)



# KDC-MP6090R/MP7018/MP8017

## PARTS LIST

\* New Parts

Parts without **Parts No.** are not supplied.

Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.

Teile ohne **Parts No.** werden nicht geliefert.

Ref. No.	Ad	New	Parts No.	Description	Destination
<b>KDC-MP6090R/MP7018/MP8017</b>					
200	1C		A02-1497-03	PLASTIC CABINET ASSY	
202	1D	*	A52-0779-02	TOP PLATE	
205	3C		A21-4073-03	DRESSING PANEL	
206	2C	*	A22-2853-23	SUB PANEL ASSY	
207	3C		A46-1692-01	REAR COVER	
208	2C	*	A50-1019-04	SIDE PLATE ASSY (L)	
209	2C	*	A50-1022-04	SIDE PLATE ASSY (R)	
PA1	3C	*	A64-2266-02	PANEL ASSY	K
PA1	3C	*	A64-2267-02	PANEL ASSY	M
PA1	3C	*	A64-2268-02	PANEL ASSY	E
RC1	1C		A70-0883-05	REMOTE CONTROLLER ASSY(RC-500)	M
213	3C	*	B03-3071-03	DRESSING PLATE	
214	2C	*	B03-3075-02	DRESSING PLATE (BLK)	
215	3D	*	B07-3007-03	ESCUTCHEON ASSY (BLK)	
216	1C	*	B07-3010-02	ESCUTCHEON (J CAR BLK)	K
217	3C	*	B10-4033-01	FRONT GLASS	M
217	3C	*	B10-4034-01	FRONT GLASS	E
-			B10-4035-01	FRONT GLASS	
-			B46-0100-50	WARRANTY CARD	
-			B46-0606-04	ID CARD	K
-			B46-0612-14	ID CARD	M
-			B46-0632-04	ID CARD	E
-			B58-1376-04	CAUTION CARD	
-		*	B64-1870-00	INST. MANUAL (ENGLISH)	E
-		*	B64-1871-00	INST. MANUAL (FRE,GER,DUT)	E
-		*	B64-1872-00	INST. MANUAL (ITA,SPA,POR)	E
-		*	B64-1879-00	INST. MANUAL (ENG,FRE,SPA)	K
-		*	B64-1880-00	INST. MANUAL (ENG,CHI)	M
220	2C	*	D10-4557-04	LEVER (SRT POSITION SW)	
221	2D	*	D10-4558-04	ARM (RELEASE)	
222	1C	*	D10-4562-04	LEVER	
223	2C	*	D13-2117-04	GEAR (IDOL)	
224	2C	*	D13-2118-04	GEAR (ARM)	
225	2C		D14-0751-04	ROLLER (PANEL)	
226	2D		D14-0752-03	ROLLER (FPC)	
227	2C		D39-0244-05	DAMPER	
231	3D		E29-1824-02	CONDUCTIVE RUBBER (KEY)	
232	2D	*	E30-4935-05	CORD WITH PINPLUG	
CN800	2D		E41-0070-05	SOCKET FOR PIN ASSY (4P)	
DC1	1C		E30-4940-05	DC CORD	K
DC2	1C		E30-4939-05	DC CORD	M
DC3	1C		E30-4943-05	DC CORD	E
FC1	1C	*	E39-0375-05	FLAT CABLE	
239	1D		F29-0049-05	INSULATING COVER	
F1	2D		F52-0006-05	FUSE(MINI BLADE TYPE) (10A)	
F1	2D		F52-0011-05	FUSE(MINI BLADE TYPE) (10A)	
242	2C	*	G01-3057-04	TORSION COIL SPRING (SW LEVER)	
243	2C	*	G01-3058-04	TORSION COIL SPRING (MAIN)	
244	2D	*	G01-3059-04	TORSION COIL SPRING (RELEASE)	
245	1D	*	G01-3060-04	TORSION COIL SPRING (FPC ROLL)	
246	3C	*	G01-3069-04	EXTENSION SPRING (LOCK)	

Ref. No.	Ad	New	Parts No.	Description	Destination
247	3C	*	G01-3070-04	COMPRESSION SPRING (RELEASE)	
248	2C	*	G11-1919-04	CUSHION (SUB PANEL MIDDLE)	
249	2C	*	G11-1920-24	CUSHION (SUB PANEL LEFT)	
251	2C	*	G16-1178-04	SHEET (CAUTION)	
-		*	H10-4763-12	POLYSTYRENE FOAMED FIXTURE	E
-		*	H10-4764-12	POLYSTYRENE FOAMED FIXTURE	K
-			H25-0329-04	PROTECTION BAG (280X450X0.03)	
-			H25-0337-04	PROTECTION BAG (180X300X0.03)	
-			H25-1108-04	PROTECTION BAG (100X300X0.03)	
-		*	H54-1999-03	ITEM CARTON CASE	E
-		*	H54-2010-03	ITEM CARTON CASE	K
-		*	H54-2014-03	ITEM CARTON CASE	M
255	2D	*	J12-1156-04	PIN (RELEASE)	
256	3C	*	J19-5036-02	HOLDER	
257	2C	*	J21-9613-12	MOUNTING HARDWARE ASSY (PANEL)	
259	1C	*	J21-9641-13	MOUNTING HARDWARE ASSY	
260	2C		J52-0604-05	PUSH LATCH	
261	1C		J54-0606-04	STAY	K
263	2C	*	J90-0999-04	GUIDE (PANEL MECHA)	
264	3C		K24-3647-04	KNOB (DB)	
265	3C		K24-3648-04	KNOB (RELEASE)	
266	3C		K24-3658-04	KNOB (RELEASE2)	
267	3C		K25-1222-03	KNOB (VOL)	
268	3C		K25-1223-03	KNOB (PRESET)	
269	3C		K25-1224-03	KNOB (SRC)	
270	3C		K25-1225-03	KNOB (FM,AM)	
271	3C		K25-1226-03	KNOB (EJECT)	
272	3C		K25-1227-03	KNOB (DISP)	
273	3C		K29-7017-03	KNOB (LOCK)	
276	1C		N99-1700-05	SCREW SET	K
277	1C		N99-1704-05	SCREW SET	
A	2D		N09-4184-05	MACHINE SCREW (M2X2 BLK)	
B	3D		N09-4448-05	MACHINE SCREW (M2X2.5)	
C	2C		N09-4449-05	MACHINE SCREW (M2X1.8 BLK)	
D	2C		N19-2150-04	FLAT WASHER (1.6X3.5X0.25)	
E	2C		N19-2160-04	FLAT WASHER (1.2X3.0X0.25)	
F	2C		N24-3015-60	E TYPE RETAINING RING	
G	2C		N35-2003-46	BINDING HEAD MACHINE SCREW	
H	2C		N35-2004-45	BINDING HEAD MACHINE SCREW	
J	2C		N38-2025-46	PAN HEAD MACHIN SCREW	
K	3C		N80-2005-46	PAN HEAD TAPTITE SCREW	
L	3D		N80-2008-45	PAN HEAD TAPTITE SCREW	
M	1D		N83-3005-46	PAN HEAD TAPTITE SCREW	
N	2C		N86-2004-45	BINDING HEAD TAPTITE SCREW	
S800,801	2D		S68-0830-05	PUSH SWITCH	
278	1C		T90-0523-05	ANTENNA ADAPTOR	E
278	1C		T90-0534-05	ANTENNA ADAPTOR	E
DME1	1D		X92-4190-00	MECHANISM ASSY (DXM-1760)	
<b>SWITCH UNIT (X13-9960-11)</b>					
284	3C	*	B11-1347-04	REFLECTION SHEET	
285	3C	*	B11-1324-04	OPTICAL DIFFUSER	
286	3C	*	B19-2062-03	LIGHTING BOARD	

E : KDC-MP6090R      M : KDC-MP7018      K : KDC-MP8017

△ indicates safety critical components.

# KDC-MP6090R/MP7018/MP8017

## PARTS LIST

\*New Parts

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Teile ohne **Parts No.** werden nicht geliefert.

### SWITCH UNIT (X13-9960-11)

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
D2 -4 D5 -22 D23 ED1	3C		B30-1571-05 B30-1605-05 B30-1564-05 B38-1052-05	LED(WHITE) LED(2COLOR PG/RED) LED(1608,BLUE) LIQUID CRYSTAL	
C1 C2 -5 C2 -5 C6 ,7 C8 -11			CC73GCH1H681J CK73GB1C104K CK73GB1H104K CK73EB1C225K CK73GB1H103K	CHIP C 680PF J CHIP C 0.10UF K CHIP C 0.10UF K CHIP C 2.2UF K CHIP C 0.010UF K	
287 J1		3C	E29-1596-04 E59-0835-05	CONDUCTIVE RUBBER RECTANGULAR PLUG (15P)	
CP1 CP2 ,3 R1 R2 -5 R6			R90-1016-05 R90-0724-05 RK73GB1J433J RK73GB1J222J RK73GB1J102J	MULTI-COMP 470 X4 MULTI-COMP 1K X4 CHIP R 43K J 1/16W CHIP R 2.2K J 1/16W CHIP R 1.0K J 1/16W	
R7 ,8 R9 R10 R11 R12		RK73GB1J223J RK73FB2A101J RK73GB1J102J RK73FB2A4R7J RK73GB1J751J	CHIP R 22K J 1/16W CHIP R 100 J 1/10W CHIP R 1.0K J 1/16W CHIP R 4.7 J 1/10W CHIP R 750 J 1/16W		
R13 R15 ,16 R17 -21 R22 R23		RK73GB1J102J RK73GB1J103J RK73EB2B331J RK73EB2B511J RK73EB2B361J	CHIP R 1.0K J 1/16W CHIP R 10K J 1/16W CHIP R 330 J 1/8W CHIP R 510 J 1/8W CHIP R 360 J 1/8W		
R24 R25 ,26		RK73EB2B331J RK73FB2A122J	CHIP R 330 J 1/8W CHIP R 1.2K J 1/10W		
D1 IC1 IC2 Q1 Q1		MA3091-M LC75808W RS-171 DTA114EUA KRA302	ZENER DIODE MOS-IC ANALOGUE IC DIGITAL TRANSISTOR DIGITAL TRANSISTOR		
Q3 ,4 Q5 Q5 Q6 Q6		2SD2114K 2SC2412K 2SD601A DTA114EUA KRA302	TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR		
Q7		DTC143ZK	DIGITAL TRANSISTOR		
<b>SUB-CIRCUIT UNIT (X16-1180-10)</b>					
290	2C		E58-0903-05	RECTANGULAR RECEPTACLE (15P)	
291	2C		J84-0121-12	FLEXIBLE PRINTED WIRING BOARD	
<b>ELECTRIC UNIT (X25-880X-XX)</b>					
C1 ,2 C13 -16 C17 ,18 C21 ,22 C23 ,24			C90-2606-05 C90-5296-05 C90-2597-05 C90-2597-05 C90-2606-05	ELECTRO 0.47UF 50WV NP-ELECT 0.22UF 50WV ELECTRO 10UF 16WV ELECTRO 10UF 16WV ELECTRO 0.47UF 50WV	
C25 C33 ,34 C41 C42			CE04CW1A470M CK73FB1H104K CK73GB1A474K CC73GCH1H151J	ELECTRO 47UF 10WV CHIP C 0.10UF K CHIP C 0.47UF K CHIP C 150PF J	

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
C43 C43 C44 C51 C52			CK73GB1E333K CK73GB1H333K CK73GB1H103K CK73GB1H222K C90-5315-05	CHIP C 0.033UF K CHIP C 0.033UF K CHIP C 0.010UF K CHIP C 2200PF K ELECTRO 3300UF 16WV	
C53 C54 C55 C56 C57			CK73GB1H103K C90-2594-05 C90-2866-05 CE04CW0J101M CK73FB1C105K	CHIP C 0.010UF K ELECTRO 10UF 10WV ELECTRO 220UF 16WV ELECTRO 100UF 6.3WV CHIP C 1.0UF K	
C58 C61 -64 C65 C66 C67			CE04CW1A221M C90-5244-05 CK73GB1H222K C90-2962-05 C90-2597-05	ELECTRO 220UF 10WV ELECTRO 56UF 25WV CHIP C 2200PF K ELECTRO 100UF 16WV ELECTRO 10UF 16WV	
C68 C69 C71 C72 C72			CE04CW1A101M C90-2962-05 CK73GB1H103K CK73GB1E223K CK73GB1H223K	ELECTRO 100UF 10WV ELECTRO 100UF 16WV CHIP C 0.010UF K CHIP C 0.022UF K CHIP C 0.022UF K	E
C73 C74 C75 C75 C76			C90-2608-05 C90-2602-05 CK73GB1C683K CK73GB1H683K C90-2598-05	ELECTRO 1.0UF 50WV ELECTRO 0.10UF 50WV CHIP C 0.068UF K CHIP C 0.068UF K ELECTRO 3.3UF 25WV	
C77 C78 -80 C83 -90 C83 -90 C91			CK73GB1H102K CK73GB1H103K CK73GB1E473K CK73GB1H473K C90-2606-05	CHIP C 1000PF K CHIP C 0.010UF K CHIP C 0.047UF K CHIP C 0.047UF K ELECTRO 0.47UF 50WV	
C92 C94 C95 C95 C96			CE04CW1C220M C90-2608-05 CK73GB1C104K CK73GB1H104K CK73GB1H222K	ELECTRO 22UF 16WV ELECTRO 1.0UF 50WV CHIP C 0.10UF K CHIP C 0.10UF K CHIP C 2200PF K	
C101 C103 C104 C105,106 C105,106			C90-2610-05 CE04CW1A470M CK73GB1H103K CK73GB1C104K CK73GB1H104K	ELECTRO 2.2UF 50WV ELECTRO 47UF 10WV CHIP C 0.010UF K CHIP C 0.10UF K CHIP C 0.10UF K	
C112 C114 C120 C121 C135			CK73GB1H103K CE04CW1A470M CK73GB1H103K CK73GB1A224K CK73GB1H103K	CHIP C 0.010UF K ELECTRO 47UF 10WV CHIP C 0.010UF K CHIP C 0.22UF K CHIP C 0.010UF K	E
C136 C137 C138 C139,140 C151			C90-2594-05 CC73GCH1H331J C90-2594-05 CC73GCH1H100D CK73GB1H103K	ELECTRO 10UF 10WV CHIP C 330PF J ELECTRO 10UF 10WV CHIP C 10PF D CHIP C 0.010UF K	E E E E
C154-157 C201 C202 C203 C204			CK73GB1H103K CK73GB1H103K CE04CW0J470M CK73GB0J105K CC73GCH1H220J	CHIP C 0.010UF K CHIP C 0.010UF K ELECTRO 47UF 6.3WV CHIP C 1.0UF K CHIP C 22PF J	

E : KDC-MP6090R M : KDC-MP7018 K : KDC-MP8017

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## PARTS LIST

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### ELECTRIC UNIT (X25-880X-XX)

Ref. No.	Add	New	Parts No.	Description	Destination
C205			CC73GCH1H270J	CHIP C 27PF J	
C206			CK73GB0J105K	CHIP C 1.0UF K	
C211			CK73GB1H102K	CHIP C 1000PF K	
CN1			E40-3241-05	PIN ASSY (6P)	
CN5			E40-9550-05	FLAT CABLE CONNECTOR (22P)	
CN6			E40-9557-05	FLAT CABLE CONNECTOR (13P)	
CN7			E40-5448-05	PIN ASSY (4P)	
J1	2D		E58-0863-15	RECTANGULAR RECEPTACLE (16P)	
J4			E56-0834-05	CYLINDRICAL RECEPTACLE (13P)	
WH1	2D		E30-4804-05	CORD WITH PLUG	
WH1	2D	*	E30-4932-05	CORD WITH PLUG	
L1			L33-1170-05	CHOKO COIL ASSY	
L2 ,3			L40-4795-91	SMALL FIXED INDUCTOR(4.7UH,J)	
L5 -7			L40-4795-91	SMALL FIXED INDUCTOR(4.7UH,J)	
L8			L33-1123-05	LINE FILTER COIL (52mH)	
L10			L40-4795-91	SMALL FIXED INDUCTOR(4.7UH,J)	E
L12			L92-0075-05	CHIP FERRITE	
L13			L33-1124-05	CHOKO COIL (220UH)	
L14			L40-4795-91	SMALL FIXED INDUCTOR(4.7UH,J)	
X1			L78-0821-05	RESONATOR (20MHz)	
X2			L77-2738-05	CRYSTAL RESONATOR (32.768kHz)	
X3			L77-2002-05	CRYSTAL RESONATOR (4.332MHz)	E
M	2D		N83-3005-46	PAN HEAD TAPTITE SCREW	
P	2D		N80-3008-46	PAN HEAD TAPTITE SCREW	
Q	2D		N83-3012-46	PAN HEAD TAPTITE SCREW	
R	2D		N86-2606-46	BINDING HEAD TAPTITE SCREW	
R1 ,2			RK73FB2A361J	CHIP R 360 J 1/10W	
R3 ,4			RK73GB1J223J	CHIP R 22K J 1/16W	
R5 ,6			RK73EB2B181J	CHIP R 180 J 1/8W	
R13 ,14			RK73FB2A361J	CHIP R 360 J 1/10W	
R15 ,16			RK73GB1J223J	CHIP R 22K J 1/16W	
R17 ,18			RK73EB2B181J	CHIP R 180 J 1/8W	
R19 -22			RK73GB1J103J	CHIP R 10K J 1/16W	
R23 ,24			RK73EB2B100J	CHIP R 10 J 1/8W	
R25			RK73EB2B4R7J	CHIP R 4.7 J 1/8W	
R41			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R42			RK73GB1J103J	CHIP R 10K J 1/16W	
R51			RK73GB1J101J	CHIP R 100 J 1/16W	
R52			RK73FB2A223J	CHIP R 22K J 1/10W	
R53			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R54			RK73GB1J223J	CHIP R 22K J 1/16W	
R55			RD14BB2C221J	RD 220 J 1/6W	
R56			RK73GB1J153J	CHIP R 15K J 1/16W	
R57			R92-3032-05	CHIP R 4.3K D 1/10W	
R58			R92-3047-05	CHIP R 24K D 1/10W	
R60			R92-3024-05	CHIP R 1.0K D 1/10W	
R61			RK73FB2A102J	CHIP R 1.0K J 1/10W	
R63		*	R92-3034-05	CHIP R 5.1K D 1/10W	
R64			RK73GB1J473J	CHIP R 47K J 1/16W	
R65			RK73EB2B2R2J	CHIP R 2.2 J 1/8W	
R71			RK73EB2B102J	CHIP R 1.0K J 1/8W	ME
R72			RK73FB2A561J	CHIP R 560 J 1/10W	ME
R73			RK73GB1J223J	CHIP R 22K J 1/16W	E

Ref. No.	Add	New	Parts No.	Description	Destination
R74			RK73EB2B103J	CHIP R 10K J 1/8W	E
R76			RK73GB1J473J	CHIP R 47K J 1/16W	E
R77			RK73GB1J104J	CHIP R 100K J 1/16W	
R78			RK73EB2B103J	CHIP R 10K J 1/8W	
R79 ,80			RD14DB2H102J	SMALL-RD 1.0K J 1/2W	
R81			RK73FB2A223J	CHIP R 22K J 1/10W	
R82 ,83			RK73FB2A472J	CHIP R 4.7K J 1/10W	
R84			R92-0366-05	CHIP R 560 J 1W	KM
R86			RK73FB2A223J	CHIP R 22K J 1/10W	KM
R87			RK73FB2A123J	CHIP R 12K J 1/10W	
R88			RK73GB1J123J	CHIP R 12K J 1/16W	
R89			RK73GB1J562J	CHIP R 5.6K J 1/16W	
R90			RK73GB1J223J	CHIP R 22K J 1/16W	
R91			RK73GB1J183J	CHIP R 18K J 1/16W	
R92			RD14BB2C473J	RD 47K J 1/6W	
R93			RD14DB2H332J	SMALL-RD 3.3K J 1/2W	
R94			RK73GB1J104J	CHIP R 100K J 1/16W	
R101			RK73GB1J103J	CHIP R 10K J 1/16W	
R102			RK73GB1J101J	CHIP R 100 J 1/16W	
R103			RK73GB1J103J	CHIP R 10K J 1/16W	
R105			RK73GB1J473J	CHIP R 47K J 1/16W	
R106			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R108			RK73GB1J622J	CHIP R 6.2K J 1/16W	
R113			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R121			RK73EB2B101J	CHIP R 100 J 1/8W	
R122-126			RK73EB2B472J	CHIP R 4.7K J 1/8W	
R127,128			RK73EB2B101J	CHIP R 100 J 1/8W	
R129,130			RK73GB1J104J	CHIP R 100K J 1/16W	
R141,142			RK73EB2B102J	CHIP R 1.0K J 1/8W	
R143,144			RK73GB1J223J	CHIP R 22K J 1/16W	
R145			RK73GB1J473J	CHIP R 47K J 1/16W	
R156			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R157			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R161			RK73GB1J102J	CHIP R 1.0K J 1/16W	E
R162			RK73GB1J472J	CHIP R 4.7K J 1/16W	E
R171-173			RK73GB1J104J	CHIP R 100K J 1/16W	
R174			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R175			RK73EB2B471J	CHIP R 470 J 1/8W	
R176			RK73GB1J105J	CHIP R 1.0M J 1/16W	
R177			RK73EB2B102J	CHIP R 1.0K J 1/8W	
R178			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R180			RK73EB2B472J	CHIP R 4.7K J 1/8W	
R181			RK73EB2B471J	CHIP R 470 J 1/8W	
R182			RK73GB1J473J	CHIP R 47K J 1/16W	
R183			RK73EB2B471J	CHIP R 470 J 1/8W	
R184			RK73EB2B102J	CHIP R 1.0K J 1/8W	
R187			RK73EB2B102J	CHIP R 1.0K J 1/8W	
R189			RK73GB1J471J	CHIP R 470 J 1/16W	
R190			RK73GB1J104J	CHIP R 100K J 1/16W	
R191			RK73GB1J471J	CHIP R 470 J 1/16W	
R192			RK73GB1J104J	CHIP R 100K J 1/16W	
R193,194			RK73GB1J471J	CHIP R 470 J 1/16W	
R202			RK73GB1J104J	CHIP R 100K J 1/16W	
R204			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R206-209			RK73GB1J102J	CHIP R 1.0K J 1/16W	

E : KDC-MP6090R

M : KDC-MP7018

K : KDC-MP8017

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# KDC-MP6090R/MP7018/MP8017

## PARTS LIST

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### ELECTRIC UNIT (X25-880X-XX)

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
R210			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R213,214			RK73GB1J104J	CHIP R 100K J 1/16W	KM
R214			RK73GB1J104J	CHIP R 100K J 1/16W	E
R215			RK73GB1J471J	CHIP R 470 J 1/16W	
R219,220			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R223,224			RK73GB1J104J	CHIP R 100K J 1/16W	
R225			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R226			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R227,228			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R229			RK73GB1J104J	CHIP R 100K J 1/16W	
R230,231			RK73GB1J471J	CHIP R 470 J 1/16W	
R232			RK73GB1J104J	CHIP R 100K J 1/16W	
R233-236			RK73GB1J222J	CHIP R 2.2K J 1/16W	E
R236			RK73GB1J222J	CHIP R 2.2K J 1/16W	KM
R237			RK73GB1J104J	CHIP R 100K J 1/16W	KM
R239			RK73GB1J104J	CHIP R 100K J 1/16W	
R241,242			RK73GB1J104J	CHIP R 100K J 1/16W	KM
R243			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R245			RK73GB1J104J	CHIP R 100K J 1/16W	
R246			RK73GB1J473J	CHIP R 47K J 1/16W	
R247			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R252,253			RK73GB1J471J	CHIP R 470 J 1/16W	
R254			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R255			RK73GB1J225J	CHIP R 2.2M J 1/16W	
R258,259			RK73GB1J471J	CHIP R 470 J 1/16W	
R260			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R261-264			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R265			RK73GB1J104J	CHIP R 100K J 1/16W	K
R266,267			RK73GB1J104J	CHIP R 100K J 1/16W	ME
R268			RK73GB1J104J	CHIP R 100K J 1/16W	K
R269			RK73GB1J104J	CHIP R 100K J 1/16W	ME
R270			RK73GB1J104J	CHIP R 100K J 1/16W	K
R271			RK73GB1J104J	CHIP R 100K J 1/16W	M
R272,273			RK73GB1J104J	CHIP R 100K J 1/16W	KE
R273			RK73GB1J104J	CHIP R 100K J 1/16W	M
R275			RK73GB1J104J	CHIP R 100K J 1/16W	
R281			RK73GB1J104J	CHIP R 100K J 1/16W	
R282			RK73GB1J103J	CHIP R 10K J 1/16W	
W1			R92-2052-05	CHIP R 0 J 1/10W	E
D1			RM10ZLF	DIODE	
D2			MA4056(N)-M	ZENER DIODE	
D3			RB160L-40	DIODE	
D4			U1GWJ44	DIODE	
D5			AM01Z	DIODE	
D5			DSM1SD2	DIODE	
D5			ERA15-02	DIODE	
D6			HZS11B2	ZENER DIODE	
D6			MA4110-L	ZENER DIODE	
D11			HZS6B1	ZENER DIODE	ME
D11			MA4056-M	ZENER DIODE	ME
D12			HZS5B1	ZENER DIODE	E
D12			MA4047-M	ZENER DIODE	E
D13			1SR154-400	DIODE	
D14			1SS133	DIODE	

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
D15 ,16			AM01Z	DIODE	
D15 ,16			DSM1SD2	DIODE	
D15 ,16			ERA15-02	DIODE	
D17			MA4056(N)-M	ZENER DIODE	
D18			MA4062(N)-M	ZENER DIODE	
D21 -28			1SR154-400	DIODE	
D30 -34			1SS133	DIODE	
D35 ,36			RD6.8M(B2)	ZENER DIODE	
D41 ,42			HZS6C1	ZENER DIODE	
D41 ,42			MA4062-L	ZENER DIODE	
D44			HZS6C1	ZENER DIODE	
D44			MA4062-L	ZENER DIODE	
D45 -47			MA4068(N)-M	ZENER DIODE	
D71			1SS133	DIODE	
IC1		*	UPD703033GC057	MI-COM IC	
IC2			TDA7407D	ANALOGUE IC	
IC3			HD74HC02FP	MOS-IC	
IC3			TC74HC02AF	IC	
IC4			TA8263BH	ANALOGUE IC	
IC7			TDA7479D	ANALOGUE IC	E
IC8			S-80837ANNP	MOS-IC	
IC10			M5237ML	IC(VOLTAGE REGULATOR)	
IC11			LM2595S-ADJ	ANALOGUE IC	
IC12			BA05T	ANALOGUE IC	
Q1 ,2			DTC143TUA	DIGITAL TRANSISTOR	
Q1 ,2		*	KRC410	DIGITAL TRANSISTOR	
Q5 ,6			DTC143TUA	DIGITAL TRANSISTOR	
Q5 ,6		*	KRC410	DIGITAL TRANSISTOR	
Q7			DTA124EUA	DIGITAL TRANSISTOR	
Q7		*	KRA303	DIGITAL TRANSISTOR	
Q11			2SC4081	TRANSISTOR	
Q11			2SD1819A	TRANSISTOR	
Q12			2SB1548(P)	TRANSISTOR	
Q13			2SA1576A	TRANSISTOR	
Q13			2SB1218A	TRANSISTOR	
Q14			DTC144EUA	DIGITAL TRANSISTOR	
Q14			UN5213	DIGITAL TRANSISTOR	
Q15			2SB1548(P)	TRANSISTOR	
Q16			DTA124EUA	DIGITAL TRANSISTOR	
Q16		*	KRA303	DIGITAL TRANSISTOR	
Q17			DTC144EUA	DIGITAL TRANSISTOR	
Q17			UN5213	DIGITAL TRANSISTOR	
Q19			DTC124EUA	DIGITAL TRANSISTOR	
Q19			UN5212	DIGITAL TRANSISTOR	
Q20			DTA124EUA	DIGITAL TRANSISTOR	
Q20		*	KRA303	DIGITAL TRANSISTOR	
Q21			2SB1184	TRANSISTOR	
Q22			2SC4081	TRANSISTOR	
Q22			2SD1819A	TRANSISTOR	
Q25			DTA123JK	DIGITAL TRANSISTOR	ME
Q25			KRA105S	DIGITAL TRANSISTOR	ME
Q26			DTC144EUA	DIGITAL TRANSISTOR	
Q26			UN5213	DIGITAL TRANSISTOR	
Q27			DTC114YUA	DIGITAL TRANSISTOR	E
Q27			UN5214	DIGITAL TRANSISTOR	E

E : KDC-MP6090R

M : KDC-MP7018

K : KDC-MP8017



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### ELECTRIC UNIT (X25-880X-XX)

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
Q27 ,28			DTC114YUA	DIGITAL TRANSISTOR	KM
Q27 ,28			UN5214	DIGITAL TRANSISTOR	KM
Q29			DTA124EUA	DIGITAL TRANSISTOR	
Q29		*	KRA303	DIGITAL TRANSISTOR	
Q30			2SA1576A	TRANSISTOR	
Q30			2SB1218A	TRANSISTOR	
Q31 ,32			2SB1277(Q,R)	TRANSISTOR	KM
Q32			2SB1277(Q,R)	TRANSISTOR	E
Q33 ,34			2SC4081	TRANSISTOR	
Q33 ,34			2SD1819A	TRANSISTOR	
Q42			DTC124EUA	DIGITAL TRANSISTOR	
Q42			UN5212	DIGITAL TRANSISTOR	
Q45 ,46			DTC124EUA	DIGITAL TRANSISTOR	
Q45 ,46			UN5212	DIGITAL TRANSISTOR	
Q47 ,48			2SB1277(Q,R)	TRANSISTOR	
Q51			2SC4081	TRANSISTOR	KM
Q51			2SD1819A	TRANSISTOR	KM
Q51 ,52			2SC4081	TRANSISTOR	E
Q51 ,52			2SD1819A	TRANSISTOR	E
Q53			DTC144EUA	DIGITAL TRANSISTOR	
Q53			UN5213	DIGITAL TRANSISTOR	
Q55			2SA1576A	TRANSISTOR	
Q55			2SB1218A	TRANSISTOR	
Q56			DTC124EUA	DIGITAL TRANSISTOR	
Q56			UN5212	DIGITAL TRANSISTOR	
TH1			PTH9C42BD471Q	POSITIVE RESISTOR	
A1	3D		X86-3240-11	TUNER UNIT	KM
A1	3D		X86-3242-70	TUNER UNIT	E
<b>PROCESSOR UNIT (X32-5080-00)</b>					
C1			C92-0633-05	CHIP-TAN 22UF 10WV	
C2 ,3			CK73GB1H102K	CHIP C 1000PF K	
C4 ,5			C92-0628-05	CHIP-TAN 10UF 10WV	
C7			CK73EB1A475K	CHIP C 4.7UF K	
C8 ,9			CK73GB1C104K	CHIP C 0.10UF K	
C10 ,11			CK73GB1H102K	CHIP C 1000PF K	
C12 -14			CK73GB1C104K	CHIP C 0.10UF K	
C15			CK73EB1A475K	CHIP C 4.7UF K	
C16			C92-0628-05	CHIP-TAN 10UF 10WV	
C17 ,18			CK73GB1H102K	CHIP C 1000PF K	
C19			CK73FB1C105K	CHIP C 1.0UF K	
C20			CK73GB1H102K	CHIP C 1000PF K	
C21			CC73GCH1H150J	CHIP C 15PF J	
C22			C92-0628-05	CHIP-TAN 10UF 10WV	
C23			CK73GB1H102K	CHIP C 1000PF K	
C24			CC73GCH1H471J	CHIP C 470PF J	
C25			CK73GB1C104K	CHIP C 0.10UF K	
C26			CK73GB1H472K	CHIP C 4700PF K	
C27 ,28			CK73FB1C105K	CHIP C 1.0UF K	
C29 -31			CK73GB1C104K	CHIP C 0.10UF K	
C32			C92-0628-05	CHIP-TAN 10UF 10WV	
C33 ,34			CK73GB1C104K	CHIP C 0.10UF K	
C35			CC73GCH1H221J	CHIP C 220PF J	
C36			CK73GB1H102K	CHIP C 1000PF K	
C37			CK73GB1H103K	CHIP C 0.010UF K	

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
C39			CK73GB1H222K	CHIP C 2200PF K	
C40			CK73GB1C104K	CHIP C 0.10UF K	
C41			CK73GB1H103K	CHIP C 0.010UF K	
C42			CC73GCH1H101J	CHIP C 100PF J	
C43			CK73GB1C473K	CHIP C 0.047UF K	
C45			CK73GB1C104K	CHIP C 0.10UF K	
C46			CK73GB1H103K	CHIP C 0.010UF K	
C48			CK73GB1H103K	CHIP C 0.010UF K	
C49			CK73GB1C104K	CHIP C 0.10UF K	
C50			CK73GB1H103K	CHIP C 0.010UF K	
C52			CK73EB1A475K	CHIP C 4.7UF K	
C53			CK73GB1C104K	CHIP C 0.10UF K	
C54			CK73EB1A475K	CHIP C 4.7UF K	
C55			CK73GB1C104K	CHIP C 0.10UF K	
C56			C92-0628-05	CHIP-TAN 10UF 10WV	
C58			C92-0628-05	CHIP-TAN 10UF 10WV	
C60			CK73EB1A475K	CHIP C 4.7UF K	
C61			CK73GB1C333K	CHIP C 0.033UF K	
C62			CK73FB1C224K	CHIP C 0.22UF K	
C63			CK73GB1H472K	CHIP C 4700PF K	
C64			CK73GB1H222K	CHIP C 2200PF K	
C65 ,66			CK73EB1A475K	CHIP C 4.7UF K	
C67			CK73GB1C104K	CHIP C 0.10UF K	
C68 ,69			CK73EB1A475K	CHIP C 4.7UF K	
C70			CK73GB1H102K	CHIP C 1000PF K	
C71 -74			CK73GB1C104K	CHIP C 0.10UF K	
C75			CK73GB1H103K	CHIP C 0.010UF K	
C76			CK73GB1H102K	CHIP C 1000PF K	
C77 ,78			CC73GCH1H471J	CHIP C 470PF J	
C79 ,80			CC73GCH1H680J	CHIP C 68PF J	
C81			CK73EB1A475K	CHIP C 4.7UF K	
C82 ,83			C92-0628-05	CHIP-TAN 10UF 10WV	
C84 ,85			C92-0633-05	CHIP-TAN 22UF 10WV	
C86			CK73EB1A475K	CHIP C 4.7UF K	
C87			C92-0093-05	CHIP C 100UF 6.3WV	
C100			CK73GB1H103K	CHIP C 0.010UF K	
C101			CK73GB1C104K	CHIP C 0.10UF K	
CN1			E40-9339-05	FLAT CABLE CONNECTOR (22P)	
CN2			E40-9536-05	FLAT CABLE CONNECTOR (16P)	
L1 -4			L92-0308-05	FERRITE CORE	
L5			L40-1001-78	SMALL FIXED INDUCTOR(10UH)	
L5		*	L40-1001-93	SMALL FIXED INDUCTOR(10UH)	
L5		*	L41-1001-10	SMALL FIXED INDUCTOR(10UH)	
X1			L78-0810-05	RESONATOR (10MHz)	
X2			L78-0573-05	RESONATOR (16.93MHz)	
CP1 -7			R90-0714-05	MULTI-COMP 10K X4	
CP8 -10			R90-1012-05	MULTI-COMP 22K X4	
R1 ,2			RK73GB1J183J	CHIP R 18K J 1/16W	
R4 -7			RK73GB1J101J	CHIP R 100 J 1/16W	
R8			RK73GB1J331J	CHIP R 330 J 1/16W	
R9			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R10			RK73GB1J103J	CHIP R 10K J 1/16W	
R12			RK73GB1J472J	CHIP R 4.7K J 1/16W	

E : KDC-MP6090R

M : KDC-MP7018

K : KDC-MP8017

△ indicates safety critical components.

# KDC-MP6090R/MP7018/MP8017

## PARTS LIST

\*New Parts

Parts without **Parts No.** are not supplied.

Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.

Teile ohne **Parts No.** werden nicht geliefert.

### PROCESSOR UNIT (X32-5080-00)

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
R13			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R14 ,15			RK73FB2A100J	CHIP R 10 J 1/10W	
R16 -19			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R20 ,21			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R22 ,23			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R24 -26			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R27			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R28 ,29			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R30 -33			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R34			RK73GB1J104J	CHIP R 100K J 1/16W	
R35			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R36 ,37			RK73GB1J4R7J	CHIP R 4.7 J 1/16W	
R38 ,39			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R40			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R41			RK73GB1J471J	CHIP R 470 J 1/16W	
R42			RK73GB1J104J	CHIP R 100K J 1/16W	
R43			RK73GB1J393J	CHIP R 39K J 1/16W	
R44			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R45			RK73GB1J103J	CHIP R 10K J 1/16W	
R46			RK73GB1J912J	CHIP R 9.1K J 1/16W	
R47			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R48			RK73GB1J682J	CHIP R 6.8K J 1/16W	
R49			RK73GB1J103J	CHIP R 10K J 1/16W	
R50			RK73GB1J123J	CHIP R 12K J 1/16W	
R51			RK73GB1J824J	CHIP R 820K J 1/16W	
R52			RK73GB1J103J	CHIP R 10K J 1/16W	
R53			RK73GB1J563J	CHIP R 56K J 1/16W	
R54			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R55			RK73GB1J103J	CHIP R 10K J 1/16W	
R56			RK73GB1J682J	CHIP R 6.8K J 1/16W	
R57			RK73GB1J622J	CHIP R 6.2K J 1/16W	
R58			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R59			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R60			RK73GB1J183J	CHIP R 18K J 1/16W	
R63			RK73GB1J103J	CHIP R 10K J 1/16W	
R64			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R65			RK73EB2B100J	CHIP R 10 J 1/8W	
R66			RK73GB1J103J	CHIP R 10K J 1/16W	
R67			RK73EB2B4R7J	CHIP R 4.7 J 1/8W	
R68			RK73FB2A820J	CHIP R 82 J 1/10W	
R73			RK73FB2A103J	CHIP R 10K J 1/10W	
R75 ,76			RK73GB1J103J	CHIP R 10K J 1/16W	
R77 ,78			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R79			RK73GB1J223J	CHIP R 22K J 1/16W	
R80 ,81			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R82			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R83			RK73GB1J223J	CHIP R 22K J 1/16W	
R84			RK73GB1J331J	CHIP R 330 J 1/16W	
R85			RK73GB1J220J	CHIP R 22 J 1/16W	
R86			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R87			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R88			RK73GB1J104J	CHIP R 100K J 1/16W	
R90			RK73GB1J101J	CHIP R 100 J 1/16W	
R91			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R94			RK73GB1J512J	CHIP R 5.1K J 1/16W	

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
R95			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R96 -99			RK73GB1J203J	CHIP R 20K J 1/16W	
R100			RK73GB1J103J	CHIP R 10K J 1/16W	
R101			RK73GB1J512J	CHIP R 5.1K J 1/16W	
R102			RK73FB2A4R7J	CHIP R 4.7 J 1/10W	
R103			RK73GB1J103J	CHIP R 10K J 1/16W	
R104			RK73GB1J331J	CHIP R 330 J 1/16W	
R105			RK73FB2A4R7J	CHIP R 4.7 J 1/10W	
R106			RK73GB1J331J	CHIP R 330 J 1/16W	
R107,108			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R109,110			RK73GB1J562J	CHIP R 5.6K J 1/16W	
R200,201			RK73GB1J103J	CHIP R 10K J 1/16W	
R202			RK73GB1J681J	CHIP R 680 J 1/16W	
W1			R92-1252-05	CHIP R 0 OHM	
W61 ,62			R92-1252-05	CHIP R 0 OHM	
W69 -72			R92-1252-05	CHIP R 0 OHM	
S1 ,2			S68-0838-05	PUSH SWITCH	
S3			S68-0859-05	PUSH SWITCH	
D1 -3			DAN202U	DIODE	
IC1		*	M30620MCAB12GP	MI-COM IC	
IC2			UPD63724B	MOS-IC	
IC3			TC74HC157AF	IC(MULTIPLEXER)	
IC4			LP2982-3.3	ANALOGUE IC	
IC5			STA013	MOS-IC	
IC6			MSM514260CP-60	MEMORY IC	
IC7			TC7SH04F	MOS-IC	
IC8			TA78L05F	IC(VOLTAGE REGULATOR/ +5V)	
IC9			PCM1716E	MOS-IC	
IC10			UPC2575GS	ANALOGUE IC	
IC11			BA5917AFP	ANALOGUE IC	
IC12			NJM5532MD	IC(OP AMP)	
IC13			NJM2903M	IC(COMPARETOR X2)	
Q1			MCH6101	TRANSISTOR	
Q2			DTC124EUA	DIGITAL TRANSISTOR	
Q3			MCH6101	TRANSISTOR	
Q4			DTC124EUA	DIGITAL TRANSISTOR	
Q5 -7			2SK3018	FET	
Q8			MCH6101	TRANSISTOR	
Q9			DTC124EUA	DIGITAL TRANSISTOR	
<b>MECHANISM ASSY (X92-4190-00)</b>					
1	2A		A10-4482-01	CHASSIS	
2	1B		A10-4225-33	CHASSIS CALKING ASSY	
3	2B		A11-0915-43	SUB CHASSIS CALKING ASSY	
5	2A		D10-3082-13	ARM	
6	2A		D10-4306-14	ARM ASSY	
7	2A		D10-4305-14	ARM ASSY	
8	3A		D10-3087-44	ARM ASSY	
9	3B		D10-3092-03	SLIDER	
10	3B		D10-3093-04	SLIDER ASSY	
11	2B		D10-3095-04	SLIDER ASSY	
12	2B		D10-3096-04	SLIDER ASSY	
13	1A		D10-3099-24	SLIDER ASSY	
14	1A		D10-3100-04	SLIDER ASSY	

E : KDC-MP6090R

M : KDC-MP7018

K : KDC-MP8017

# KDC-MP6090R/MP7018/MP8017

## PARTS LIST

\* New Parts

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Teile ohne **Parts No.** werden nicht geliefert.

### MECHANISM ASSY (X92-4190-00)

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
16	1B		D10-4004-04	LEVER ASSY	
17	1B		D10-4006-04	LEVER	
18	1A		D10-4007-04	LEVER	
19	2B		D10-4008-14	LEVER	
20	2A		D10-4009-23	ARM	
21	3A		D10-4010-04	LEVER	
22	3A		D10-4307-04	LEVER ASSY	
24	3B		D10-4050-04	ARM	
25	3A		D10-4038-23	ARM ASSY	
26	2A		D10-4123-24	LEVER ASSY	
27	3A		D13-1442-03	RACK (GEAR)	
29	3B		D13-1231-04	GEAR	
30	3A		D13-1240-04	GEAR	
31	3B		D13-1233-04	GEAR	
32	3B		D13-1234-14	GEAR ASSY	
33	3A		D13-1441-03	GEAR	
34	3B		D13-1232-04	GEAR	
35	3B		D13-1241-04	GEAR	
36	3A		D13-1242-04	GEAR	
37	1B		D13-1243-04	GEAR	
38	1B		D13-1244-04	GEAR	
39	1B		D13-1245-14	GEAR	
40	2A		D13-1246-04	GEAR	
41	2B		D13-1247-04	GEAR	
43	2B		D13-1249-04	GEAR ASSY	
44	2B		D13-1341-04	GEAR ASSY (LEAD SCREW)	
45	1B		D14-0668-04	ROLLER	
46	2A		D14-0670-04	ROLLER	
47	3B		D14-0674-04	ROLLER	
49	3A		D21-2228-14	SHAFT	
50	1A		D21-2229-04	SHAFT	
51	1A		D23-0925-24	RETAINER	
52	2A		D32-0614-04	STOPPER	
53	1B		D39-0223-05	DAMPER (YEL)	
54	2B		D39-0224-05	DAMPER (BLK)	
55	3B		F09-1246-04	SHEET	
58	3B		F09-1266-14	SHEET	
60	2A		G01-2770-04	EXTENSION SPRING	
61	3A		G01-2771-04	EXTENSION SPRING	
62	3A		G01-2772-24	EXTENSION SPRING	
63	3A		G01-2773-14	EXTENSION SPRING	
64	3A		G01-2774-34	EXTENSION SPRING	
65	1B		G01-2775-04	TORSION COIL SPRING	
66	1B		G01-2776-14	TORSION COIL SPRING	
67	3B		G01-2777-24	TORSION COIL SPRING	
69	2A		G01-2844-04	EXTENSION SPRING	
70	2A		G02-1231-04	FLAT SPRING	
71	2B	*	G02-1319-04	FLAT SPRING	
72	2A		G02-1241-24	FLAT SPRING	
73	2A		G02-1248-14	FLAT SPRING	
75	2A		J11-0613-13	CLAMPER	
76	3A		J19-4678-13	HOLDER	
77	2B	*	J19-4923-04	HOLDER	
78	3B		J21-7684-13	MOUNTING HARDWARE	

Ref. No.	A d d	N e w	Parts No.	Description	Dest inati on
79	2B		J21-7686-13	MOUNTING HARDWARE	
80	1B		J21-7690-03	MOUNTING HARDWARE	
82	3A		J84-0107-05	FLEXIBLE PRINTED WIRING BOARD	
83	1A		J90-0757-22	GUIDE	
A	2A		N09-4249-05	MACHINE SCREW (M1.7X2.5,LOCK)	
B	1B		N09-4172-05	TAPPING SCREW (2X3.5,CTITE)	
C	2B		N09-4202-05	STEPPED SCREW	
D	2A		N38-2020-46	PAN HEAD MACHIN SCREW	
E	3A		N09-4294-05	TAPTITE SCREW (BIND P TAPTIT)	
F	3B		N19-2023-04	FLAT WASHER	
G	2A		N19-2058-04	FLAT WASHER	
H	3A		N19-2093-04	FLAT WASHER	
J	2A		N39-2020-46	PAN HEAD MACHIN SCREW	
DM1	3B		T42-0764-04	DC MOTOR ASSY (SPINDLE)	
DM2	3B		T42-0763-04	DC MOTOR ASSY (LOADING)	
DPU1	2B		T25-0215-05	OPTICAL PICKUP HEAD	

E : KDC-MP6090R

M : KDC-MP7018

K : KDC-MP8017

△ indicates safety critical components.

# KDC-MP6090R/MP7018/MP8017

## SPECIFICATIONS

	Model	KDC-MP8017	KDC-MP7018	KDC-MP6090R
FM	Frequency Range (Frequency step)	87.9MHz~107.9MHz (200kHz)	87.5MHz~108.0MHz ( 50kHz) 87.9MHz~107.9MHz (200kHz)	87.5MHz~108.0MHz (50kHz)
	Channel Space Selection	50kHz/200kHz	50kHz/200kHz	-
	Usable Sensitivity (S/N 26dB)	-	-	0.7 $\mu$ V/75 $\Omega$
	Usable Sensitivity (S/N 30dB)	9.3dBf (0.8 $\mu$ V/75 $\Omega$ )	9.3dBf (0.8 $\mu$ V/75 $\Omega$ )	-
	Quieting Sensitivity (S/N 46dB)	-	-	1.6 $\mu$ V/75 $\Omega$
	Quieting Sensitivity (S/N 50dB)	15.2dBf (1.6 $\mu$ V/75 $\Omega$ )	15.2dBf (1.6 $\mu$ V/75 $\Omega$ )	-
	Frequency Response ( $\pm$ 3.0dB)	30Hz~15kHz	30Hz~15kHz	30Hz~15kHz
	S/N	70dB (MONO)	70dB (MONO)	65dB (MONO)
	Selectivity	$\geq$ 80dB ( $\pm$ 400kHz)	$\geq$ 80dB ( $\pm$ 400kHz)	-
	Selectivity (DIN)	-	-	$\geq$ 80dB ( $\pm$ 400kHz)
	Stereo Separation	40dB (1kHz)	40dB (1kHz)	35dB (1kHz)
AM (MW)	Frequency Range (Frequency step)	530kHz~1700kHz (10kHz)	531kHz~1611kHz ( 9kHz) 530kHz~1700kHz (10kHz)	531kHz~1611kHz (9kHz)
	Channel Space Selection	9kHz/10kHz	9kHz/10kHz	-
	Usable Sensitivity (S/N 20dB)	28dB $\mu$ (25 $\mu$ V)	28dB $\mu$ (25 $\mu$ V)	25 $\mu$ V
LW	Frequency Range	-	-	153kHz~281kHz
	Usable Sensitivity (S/N 20dB)	-	-	45 $\mu$ V
CD	Laser Diode	GaAlAs ( $\lambda$ =780nm)	GaAlAs ( $\lambda$ =780nm)	GaAlAs ( $\lambda$ =780nm)
	Digital Filter (D/A)	8 Times Over Sampling	8 Times Over Sampling	8 Times Over Sampling
	D/A Converter	1 Bit	1 Bit	1 Bit
	Spindle Speed	500~200rpm (CLV)	500~200rpm (CLV)	500~200rpm (CLV)
	Wow & Flutter	Below Measurable Limit	Below Measurable Limit	Below Measurable Limit
	Frequency Response	10Hz~20kHz ( $\pm$ 1dB)	10Hz~20kHz ( $\pm$ 1dB)	10Hz~20kHz ( $\pm$ 1dB)
	THD	0.01% (1kHz)	0.01% (1kHz)	0.01% (1kHz)
	S/N Ratio	93dB (1kHz)	93dB (1kHz)	93dB (1kHz)
	Dynamic Range	93dB	93dB	93dB
	Channel Separation	85dB	85dB	85dB
Pre-out Level/Load (Unbalanced)		1800mV/10k $\Omega$ (CD/CD-CH)	1800mV/10k $\Omega$ (CD/CD-CH)	1800mV/10k $\Omega$ (CD/CD-CH)
Pre-out Impedance		$\leq$ 600 $\Omega$	$\leq$ 600 $\Omega$	$\leq$ 600 $\Omega$
AMPLIFIER	Maximum Power	47Wx4	47Wx4	47Wx4
	Full Bandwidth Power (at less than 1% THD)	22Wx4	22Wx4	-
	Power DIN45324, +B=14.4V	-	-	29Wx4
TONE	Bass	100Hz $\pm$ 10dB	100Hz $\pm$ 10dB	100Hz $\pm$ 10dB
	Middle	1kHz $\pm$ 10dB	1kHz $\pm$ 10dB	1kHz $\pm$ 10dB
	Treble	10kHz $\pm$ 10dB	10kHz $\pm$ 10dB	10kHz $\pm$ 10dB
GENERAL	Operating Voltage (11V~16V allowable)	14.4V	14.4V	14.4V
	Current Consumption	10A	10A	10A
	Installation Size (W)	182mm 7-3/16inch	182mm	182mm
		(H) 53mm 2-1/16inch	53mm	53mm
		(D) 162mm 6-5/16inch	162mm	162mm
Weight	1.7kg (4.0lbs)	1.7kg	1.7kg	

**KENWOOD** follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

## KENWOOD CORPORATION

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