

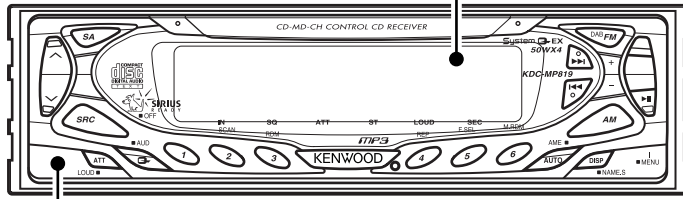
## SERVICE MANUAL

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B51-7927-00 (S) 1727

- This service manual does not include information on the CD mechanism assembly (exploded view, parts list, schematic diagram or mechanism operation description).  
For such information, please refer to the CD mechanism assembly service manual (X92-4460-0x: B51-7891-00).

KDC-MP819

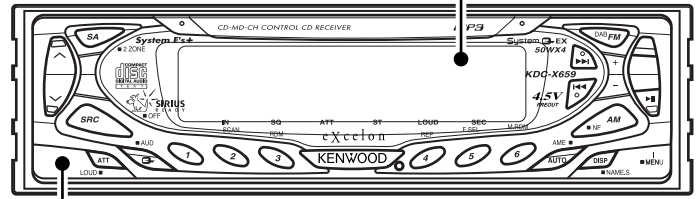
Front glass  
(B10-4207-01)



Panel assy  
(A64-2644-11)

KDC-X659

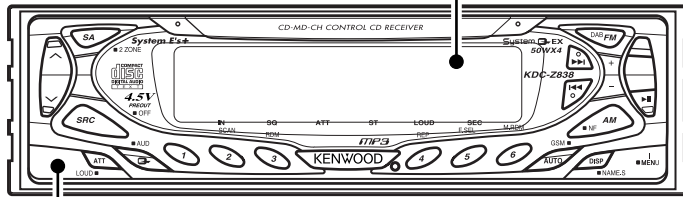
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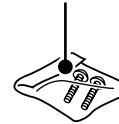
KDC-Z838

Front glass  
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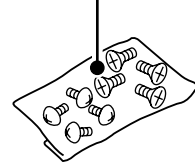


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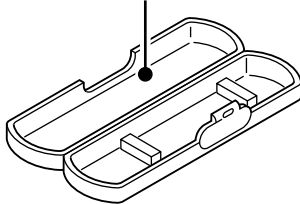
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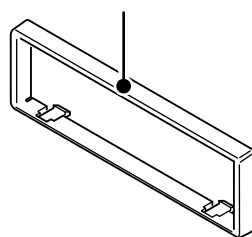
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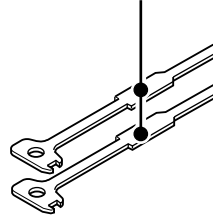
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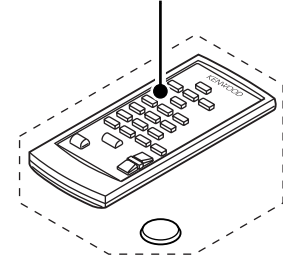
Escutcheon  
(B07-3050-02): KDC-MP819/Z838  
(B07-3057-02): KDC-X659



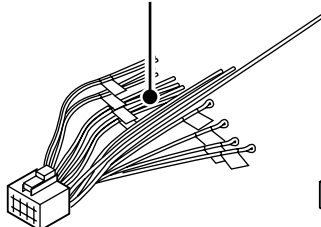
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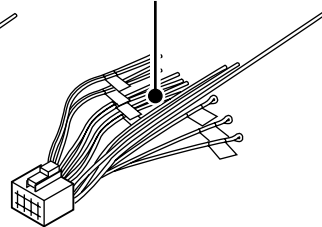
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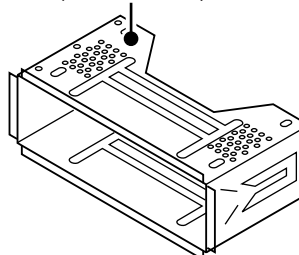
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: KDC-MP819/X659



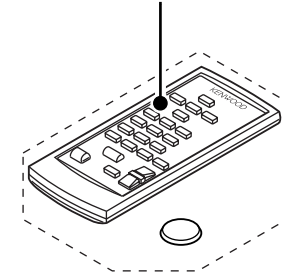
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: KDC-Z838



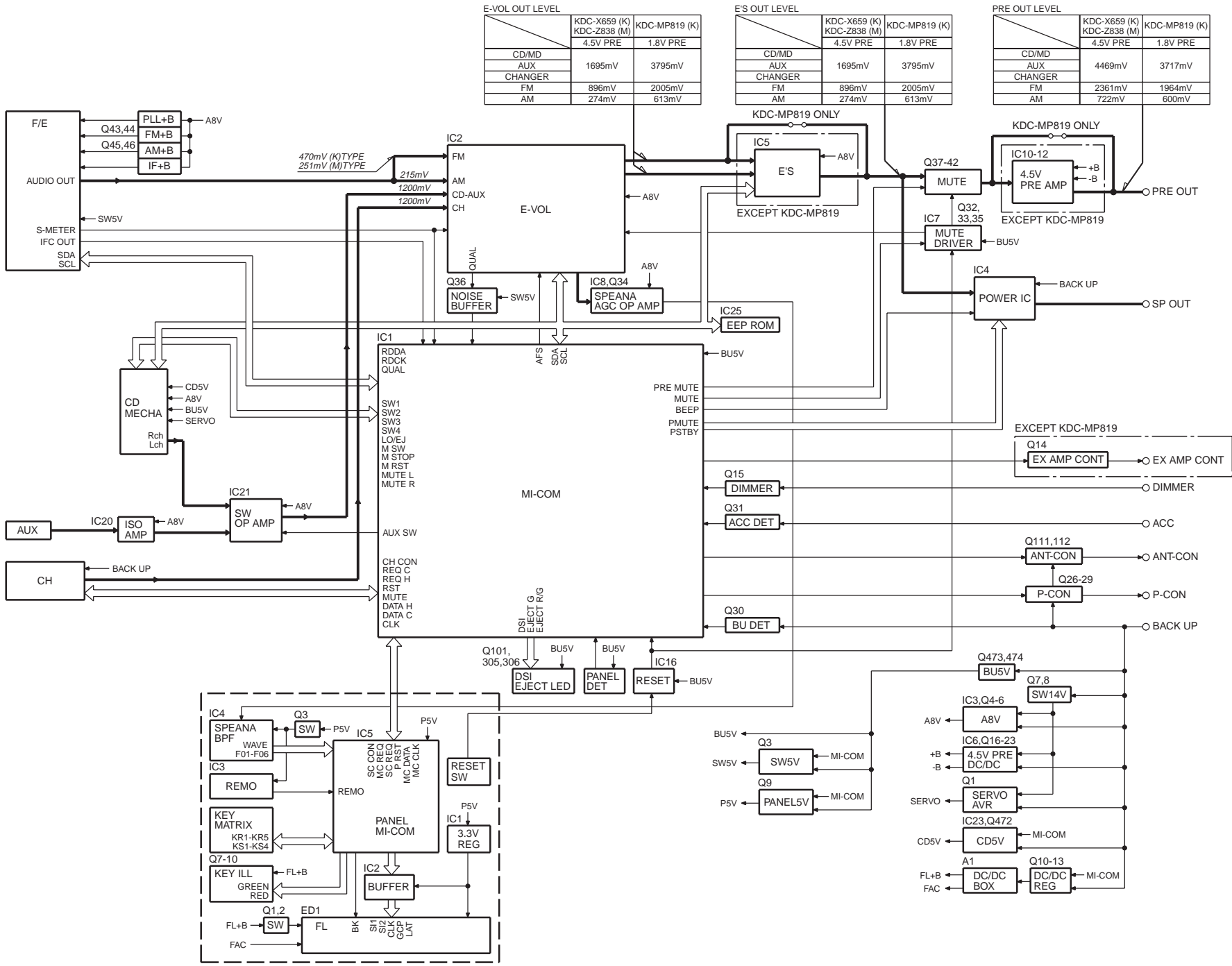
Mounting hardware assy  
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Remote controller assy  
(A70-2026-05): KDC-MP819



BLOCK DIAGRAM



## COMPONENT DESCRIPTION

### ● SWITCH UNIT (X16-168X-XX)

Ref.No.	Component Name	Application/Function	Operation/Condition/Compatibility
IC1	TAR5S33	FL AVR	+3.3V Output
IC2	TC74HC4050AFT	Buffer	For FL control lines, 5V → 3.3V logic level shifting
IC3	RS-171	Remote sensor IC	
IC4	BA3830F	BPF IC	BPF for the spectrum analyser indicator
IC5	UPD703032GFA04	Panel MI-COM.	
Q1	DTA144EUA or UN5113	FL+B SW	FL & Illumination +B ON/OFF control. When Q2's base goes Hi, Q1 is turned on, and FL+B(45V) line is supplied to the FL indicator and the key illumination circuit.
Q2	DTC114YUA or UN5214		
Q3	DTA114EUA or UN5111	REMO SW	When a base goes Lo, Q3 is turned on, and PAN5V line is supplied to IC3 and IC4.
Q4	DTC114EUA or UN5211	FL blanking SW	When a base goes Hi, Q4 is turned on, and FL indicator is lit.
Q6	DTC114YK or UN2214	SRC key illumination SW	When a base goes Hi, Q6 is turned on, and SRC illumination is lit.
Q7	2SC4081	V-I converter	Current driver for green LEDs
Q8	2SC4081	V-I converter	Current driver for red LEDs
Q9	DTA114EUA or UN5111	Key illumination Red SW	When a base goes Lo, Q9 is turned on, and key illumination Red is lit.
Q10	DTA114EUA or UN5111	Key illumination Green SW	When a base goes Lo, Q10 is turned on, and key illumination Green is lit.

### ● ELECTRIC UNIT (X25-9240-XX)

Ref.No.	Component Name	Application/Function	Operation/Condition/Compatibility
IC1	UPD703033GFA17	System MI-COM.	
IC2	TDA7407	E-VOL.& N.C. MPX	
IC3	M5237ML	AVR IC	IC is combined with Q4, and it works as the error detection, the Q4's driver.
IC4	TDA7560	Power IC	
IC5	TDA7401	High pass filter & Non-Fader volume	HPF(Front/Rear output), LPF, Non-Fader switching and volume function
IC6	ICL7660SIBA	DC/DC converter	-9V AVR for pre-output amplifier
IC7	TC74HC02AF	Mute logic	2-input NOR x 4
IC8	NJM4565M-TE2	Op. amp.	Amplifier for the spectrum analyser and generation of Vref. (1/2Vcc) voltage
IC10	NJM4565M-TE2	Op. amp.	Amplifier for the front pre-outputs
IC11	NJM4565M-TE2	Op. amp.	Amplifier for the non-fader pre-outputs
IC12	NJM4565M-TE2	Op. amp.	Amplifier for the rear pre-outputs
IC16	S-80837ANNP	Reset IC	When BU 5V voltage is less than 3.7V, IC outputs Lo.
IC20	BA3121F	Isolation amplifier	AUX inputs isolation amplifier
IC21	BA3129F	Switched op.amp.	Input switching with AUX inputs and CD inputs
IC23	SI-8050JD	MECHA. AVR	DC/DC converter, +5V output for CD mechanism adapted for MP3
IC25	BR24C02F-W	EEPROM	
Q1	2SD2375	CD servo AVR	AVR for CD mechanism servo operation, +7.5V output.
Q3	2SA1037K	SW 5V	While a base goes Lo, SW 5V is supplied to the microprocessor peripheral circuits.
Q4	2SA2057	A.+8V AVR	Q4 is combined with IC3, and it works as the power supply of +8.0V output.
Q5	DTC144EUA or UN5213	A.+8V AVR SW	When Q5's base goes Hi, Q6 is turned on, and A.+8V AVR is working.
Q6	DTA124EUA or UN5112		
Q7	DTA124EUA or UN5112	SW14V	When Q8's base goes Hi, Q7 is turned on, and A.+8V AVR, CD servo AVR and A.+10V AVR are working.
Q8	DTC124EUA or UN5212		
Q9	2SB1427	PAN5V SW	For PAN5V on/off switching. When a base goes Lo with panel attached to the set, Q9 is turned on, and PAN5V is supplied to the panel.
Q10	2SA2057	FL/Illumination AVR	When Q11's base goes Hi, AVR outputs +9V.
Q11	2SC4081		
Q12	DTC124EUA or UN5212	FL/Illumination AVR SW	When Q12's base goes Hi, Q13 is turned on, and FL/Illumination AVR is working.
Q13	DTA124EUA or UN5112		
Q14	DTA123JK or KRA105S	EXT. AMP CON. SW	When a base goes Lo, Q14 is turned on, and control pulse signal is outputted.
Q15	DTC144EUA or UN5213	Dimmer detection SW	When vehicle small lamps turn on, Q15's base goes Hi, and it is turned on.
Q16	2SB1443	A.+10V AVR	When Q17's base goes Hi, AVR outputs +10V.
Q17	2SC4081		

## COMPONENT DESCRIPTION

Ref.No.	Component Name	Application/Function	Operation/Condition/Compatibility
Q18	2SA1576A	PRE-AMP -9V AVR	Q18 and Q20 work as a differential amplifier, Q19 works as a driver, and -9.3V is supplied to OP AMP.
Q19	2SC4081		
Q20	2SA1576A		
Q21	2SC4081	PRE-AMP +9V AVR	Q21 and Q22 work as a differential amplifier, Q23 works as a driver, and +9.7V is supplied to OP AMP.
Q22	2SC4081		
Q23	2SA1576A		
Q26	2SB1277(Q,R)	P-CON SW	When Q29's base goes Hi, Q26 is turned on, and P-CON signal is outputted. Works during POWER ON mode.
Q29	DTC114YUA or UN5214		
Q27	2SA1576A	P-CON. protection SW	Protect Q26 by turning ON when P-CON output is grounded.
Q28	DTA124EUA or UN5112	P-CON. protection inhibit SW	Prevents Q27 tuning ON during start-up after power ON.
Q30	2SC4081	BU detection SW	While BACKUP is applied, a base goes Hi, and Q30 is turned on. When momentary power down has detected, a base goes Lo, and Q30 is turned off.
Q31	2SC4081	ACC detection SW	While ACC is applied, a base goes Hi, and Q31 is turned on.
Q32	DTA124EUA or UN5112	Mute driver for R Ch.	When BU detection SW or System RESET or MI-COM.'s MUTE is working, a base goes Lo, and Q32 and Q33 are turned on.
Q33	DTA124EUA or UN5112	Mute driver for L Ch.	
Q34	2SC4081	AGC for spectrum analyser	
Q35	DTC124EUA or UN5212	E. VOL. mute SW	When BU detection SW or MI-COM.'s mute is working, a base goes Hi, and Q35 is turned on.
Q36	DTC143TUA or UN5216	Noise buffer	
Q37	DTC143TUA or UN5216	Audio mute SW (Front L)	When Q37's base goes Hi, Pre-output is muting.
Q38	DTC143TUA or UN5216	Audio mute SW (Front R)	When Q38's base goes Hi, Pre-output is muting.
Q39	DTC143TUA or UN5216	Audio mute SW (Non Fader R)	When Q39's base goes Hi, Pre-output is muting.
Q40	DTC143TUA or UN5216	Audio mute SW (Non Fader L)	When Q40's base goes Hi, Pre-output is muting.
Q41	DTC143TUA or UN5216	Audio mute SW (Rear L)	When Q41's base goes Hi, Pre-output is muting.
Q42	DTC143TUA or UN5216	Audio mute SW (Rear R)	When Q42's base goes Hi, Pre-output is muting.
Q43	DTC124EUA or UN5212	FM+B SW	When Q43's base goes Hi, Q44 is turned on, and A.+8V is supplied to the F/E. Works during FM reception mode or RDS reception mode.
Q44	CPH3105		
Q45	DTC124EUA or UN5212	AM+B SW	When Q45's base goes Hi, Q46 is turned on, and A.+8V is supplied to the F/E. Works during AM reception mode.
Q46	CPH3105		
Q101	DTA114YUA or UN5114	DSI LED SW	When a base goes Lo, Q101 is turned on, and DSI illumination LED is lit.
Q103	DTC124EUA or UN5212	AUX/CD selector SW	When a base goes Hi, AUX inputs are selected. When a base goes Lo, CD inputs are selected.
Q111	2SB1277(Q,R)	P-ANT SW	When Q112's base goes Hi, Q111 is turned on, and P-ANT signal is outputted. Works during FM/AM reception mode or RDS reception mode.
Q112	DTC114YUA or UN5214		
Q305	DTA114YUA or UN5114	EJECT LED SW	When a base goes Lo, Q305 is turned on, and EJECT illumination LED is lit.
Q306	DTA114YUA or UN5114	EJECT LED SW	When a base goes Lo, Q306 is turned on, and EJECT illumination LED is lit.
Q472	DTC144EUA or UN5213	MECHA. AVR SW	When a base goes Hi, Q472 is turned on, and MECHA. AVR operation stops.
Q473	2SC4081	BU 5V AVR	While BACKUP is applied, AVR outputs +5V. Q473 and Q474 are inverted Darlington connection.
Q474	2SB1548(P)		

## MICROCOMPUTER'S TERMINAL DESCRIPTION

## ● IC5 (SWITCH UNIT : X16-168X-XX)

Pin No.	Pin Name	I/O	Description	Processing Operation
1	SC DATA	I/O	Data input/output with the system MI-COM.	
2	MC CLK	I	Clock input from the system MI-COM.	
3	NC	O		Not used(N.C.)
4	DATA 1	O	Data output 1 to the FL driver IC	
5	CLK	O	Clock output to the FL driver IC	(Data shift by the rise edge of the pulse)
6	NC	O		Not used(N.C.)
7	DATA 2	O	Data output 2 to the FL driver IC	
8	CLK IN	I	Clock input from the FL driver IC	(Data shift by the rise edge of the pulse)
9	EVDD	-	Positive power supply connection terminal	Connected to P5V lines.
10	EVSS	-	Ground connection terminal	Connected to GND lines.
11	RED LED	O	Illumination red ON/OFF output in case of two colours /Illumination ON/OFF output in case of one colour	Lo: ON, Hi: OFF
12	GREEN LED	O	Illumination green ON/OFF output in case of two colours /Not used in case of one colour	Lo: ON, Hi: OFF in case of two colours /Not used(N.C.) in case of one colour
13	REMO	I	Data input from the remote control light sensor	
14	LATCH	O	Latch output to the FL driver IC	Lo: Latch, Hi: Through
15	GCP	O	Control pulse output to the FL brightness	
16	REMO ON	I/O	Power supply ON/OFF output to the remote control light sensor IC and BPF IC	Lo: ON, Hi-z: OFF
17-19	NC	O		Not used(N.C.)
20	BLK	O	Display ON/OFF control output	Lo: Display OFF, Hi: Display ON
21	TEST	I	Test terminal	Not used(Connected to GND lines)
22-33	NC	O		Not used(N.C.)
34	RESET	I	Reset terminal	Lo: Reset, Hi: Reset release
35	XT1	-	Sub clock resonator connection terminal	Not used(Pull down to GND lines)
36	XT2	-	Sub clock resonator connection terminal	Not used(N.C.)
37	REGC	-	Capacitor connection terminal for regulator inside microprocessor	
38	X2	-	Main clock resonator connection terminal	
39	X1	-	Main clock resonator connection terminal	
40	VSS	-	Ground connection terminal	Connected to GND lines.
41	VDD	-	Positive power supply connection terminal	Connected to P5V lines.
42-47	NC	O		Not used(N.C.)
48	FL +3.3V	O	FL VDD ON/OFF output	Lo: OFF, Hi: ON
49	FL+B	I/O	FL+B ON/OFF output	Hi-Z: OFF, Hi: ON
50-55	NC	O		Not used(N.C.)
56	BLUE LED	I/O	Source key LED ON/OFF output	Hi-Z: OFF, Hi: ON
57	NC	O		Not used(N.C.)
58	BVDD	-	Positive power supply connection terminal	Connected to P5V lines.
59	BVSS	-	Ground connection terminal	Connected to GND lines.
60-71	NC	O		Not used(N.C.)
72	SA RESET	O	Reset output to the BPF IC	Hi: Reset
73	NC	O		Not used(N.C.)
74	AVDD	-	A/D converter positive power supply connection terminal	Connected to P5V lines.
75	AVSS	-	A/D converter ground connection terminal	Connected to GND lines.
76	AVREF	-	A/D converter reference voltage input terminal	
77	F01	I	BPF(63Hz) input	
78	F02	I	BPF(150Hz) input	
79	F03	I	BPF(330Hz) input	
80	F04	I	BPF(1kHz) input	
81	F05	I	BPF(3.3kHz) input	
82	F06	I	BPF(10kHz) input	
83	WAVE IN	I	Audio input	
84	KR5	I	Key return 5 input	
85	KR4	I	Key return 4 input	
86	KR3	I	Key return 3 input	
87	KR2	I	Key return 2 input	


## MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Description	Processing Operation
88	KR1	I	Key return 1 input	
89	SC REQ	O	Communication request output to the system MI-COM.	Lo: Standby, Hi: Request
90	NC	O		Not used(N.C.)
91	SC CON	I	Control input from the system MI-COM.	Hi: Operation mode
92	NC	O		Not used(N.C.)
93	SOURCE	I	Source key input	Lo: Key OFF, Hi: Key ON
94	VREF CON	O	A/D converter reference voltage control output	Hi: Active, Connected to AVREF terminal
95	MC REQ	I	Communication request input from the system MI-COM.	Hi: Request
96	KS4	I/O	Key scan output 4	
97	KS3	I/O	Key scan output 3	
98	KS2	I/O	Key scan output 2	
99	KS1	I/O	Key scan output 1	
100	MC DATA	I	Data input from the system MI-COM.	

## ● IC5 (ELECTRIC UNIT: X25-9240-XX)

Pin No.	Pin Name	I/O	Description	Processing Operation
1	MC DATA	I/O	Data input/output with the panel MI-COM.	
2	MC CLK	O	Clock output to the panel MI-COM.	
3	DSI GUIDE	I/O	DSI control output	Lo: DSI ON, Hi-Z: DSI OFF Lights on at the panel tilted during POWER ON mode. Flashing at the panel detached during POWER ON mode.
4	EJECT KEY G	O	Eject key illumination green control output	Lo: ON, Hi-Z: OFF Lights on at the panel tilted during POWER ON mode in case of the key illumination green.
5	EJECT KEY R/G	O	Eject key illumination red/green control output	Lo: ON, H-Z: OFF Lights on at the panel tilted during POWER ON mode.
6	MC REQ /FLIP DET	I/O	Communication request output to the panel MI-COM. /Flip detection input	Hi: Request /Lo: Panel detached, Hi: Panel attached
7	IC2 SDA	I/O	Data input/output with IC2, IC5, and IC25	
8	IC2 SCL	I/O	Clock input/output with IC2, IC5, and IC25	
9	EVDD	-	Positive power supply connection terminal	Connected to BU 5V lines.
10	EVSS	-	Ground connection terminal	Connected to GND lines.
11	PAN RESET	O	Reset output to the panel MI-COM.	Lo: Reset or Momentary power down detected
12	BEEP	O	BEEP output	
13	REMO	I	Data input from the wired remote control	
14	SVR	O	SVR output	Not used(N.C.)
15	DIMMER	I	Small lights detection input	Lo: During vehicle small lamps turn on
16	PLL DATA	I/O	Data input/output with F/E	
17	PLL CLK	I/O	Clock input/output with F/E	
18	P-STBY	O	POWER IC STBY output	Lo: Power IC OFF, Hi: Power IC ON or ALL OFF mode
19	P-CON	I/O	P-CON output	Hi-Z: POWER OFF mode or ALL OFF mode, Hi: POWER ON mode
20	ANT-CON	O	ANT-CON output	Hi: During TUNER mode or last FM mode with RDS/RBDS model
21	TEST	-	Test terminal	Not used(Connected to GND lines)
22	P MUTE	O	POWER IC mute output	Lo: Muting during POWER OFF mode, ALL OFF mode and TEL MUTE ON
23	PAN5V	I/O	Panel 5V control output	Lo: Panel attached normally, Hi-Z: Panel detached or tilted
24	EXT-AMP-CON	O	External amp. control output (in 200msec)	Bass boost OFF__Hi: 160msec, Lo: 40msec Bass boost LOW__Hi: 130msec, Lo: 70msec Bass boost HI__Hi: 100msec, Lo: 100msec
25	CD MECHA+B	I/O	CD4.7V ON/OFF output	Lo: During CD source selected, Hi-z: Except CD source selected
26	EMUTE	O		Not used(N.C.)
27	BU DET	I	Momentary power down detection input	Lo: BU ON, Hi: When momentary power down detected or BU OFF

## MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Description	Processing Operation
28	ACC DET	I	ACC detection terminal	Lo: ACC ON, Hi: ACC OFF
29	SW5V	I/O	SW5V control terminal	Lo: SW5V ON, Hi-Z: SW5V OFF
30	MUTE	I/O	MUTE output	Lo: Muting OFF, Hi-Z: Muting ON
31	O CE	I/O	External display CE terminal	
32	O CLK	I/O	External display clock terminal	
33	O DATA	I/O	External display data terminal	
34	RESET	I	Reset input	Lo: System reset , Hi: Normal operation
35	XT1	I	Sub clock resonator connection terminal	Clock count during POWER OFF mode
36	XT2	-	Sub clock resonator connection terminal	
37	REGC	-	Capacitor connection terminal for regulator inside microprocessor	
38	X2	-	Main clock resonator connection terminal	Oscillation: POWER ON mode, Oscillation stop: POWER OFF mode or momentary power down detected
39	X1	I	Main clock resonator connection terminal	
40	VSS	-	Ground connection terminal	Connected to GND lines.
41	VDD	-	Positive power supply connection terminal	Connected to BU 5V lines.
42	CLKOUT	O	Internal system clock output	Not used(N.C.)
43	NC	O		Not used(N.C.)
44	E2PDET	I	EEPROM detection input	Lo: No EEPROM, Hi: With EEPROM
45	PRE MUTE L	O	Pre-out muting L Ch. control output	Lo: When M MUTE L input is Lo during CD source selected or Momentary power down detected, Hi: Fix in the case of 2 zone mode
46	PRE MUTE R	O	Pre-out muting R Ch. control output	Lo: When M MUTE R input is Lo during CD source selected or Momentary power down detected, Hi: Fix in the case of 2 zone mode
47	DSP DATA	O	Data output to DSP IC	Not used(N.C.)
48	DSP LATCH	O	Latch output to DSP IC	Not used(N.C.)
49	DSP CLK	O	Clock output to DSP IC	Not used(N.C.)
50	AFS	O	Noise detection time constant switching terminal	Lo: During FM seek or AF search, Hi: During FM reception, Hi: During last FM mode with RDS/RDBS model
51	AM+B	I/O	AM+B control	Hi: During AM reception
52	FM+B	I/O	FM+B control	Hi: During FM reception, Hi: During last FM mode with RDS/RDBS model
53	R QUAL	I	Quality input from the RDS decoder IC	Except RDS, RBDS model: Not used(pull down to GND lines)
54	R DATA	I	Data input from the RDS decoder IC	Except RDS, RBDS model: Not used(pull down to GND lines)
55	IC2TYPE0	I	IC2 setting terminal	Lo: Initial value(default)
56	IC2TYPE1	I	IC2 setting terminal	Lo: Initial value(default)
57	P ON	I/O	SW 14V control output	Hi-Z: POWER OFF mode, Hi: POWER ON mode
58	BVDD	-	Positive power supply connection terminal	Connected to BU 5V lines.
59	BVSS	-	Ground connection terminal	Connected to GND lines.
60	TYPE0	I	Destination type selection terminal 0	
61	TYPE1	I	Destination type selection terminal 1	
62	TYPE2	I	Destination type selection terminal 2	
63	TYPE3	I	Destination type selection terminal 3	
64	AUX SW	O	CD/AUX input switching output	Lo: Except AUX input, Hi: AUX input
65	ILL ON	I/O	FL/Illumination AVR ON/OFF control output	Hi-Z: AVR OFF, Hi: AVR ON
66	MOSW	O	CD mechanism loading motor control output	Hi: CD loading/eject action or Break, Lo: Other
67	LO/EJ	I/O	CD mechanism loading/Eject switching output	Lo: Loading, Hi: Eject, Hi-Z: Stop or Break
68	M STOP	O	Stop request to CD mechanism MI-COM.	Lo: Stop mode, Hi: Operation mode
69	M RST	O	Reset output to CD mechanism MI-COM.	Lo: Reset
70	CH CON	O	Changer control	Lo: Standby mode, Hi: Operation mode
71	CH RST	O	Reset output to changers	 : Reset
72	CH REQH	O	Request output to changers	Lo: Request
73	AVCONT	O	A/D converter reference voltage control output	Hi: Active, Connected to AVREF terminal

# KDC-MP819/X659/Z838

## MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Description	Processing Operation
74	AVDD	-	A/D converter positive power supply connection terminal	Connected to BU 5V lines.
75	AVSS	-	A/D converter ground connection terminal	Connected to GND lines.
76	AVREF	I	A/D converter reference voltage input terminal	
77	IFC OUT	I	F/E IFC OUT input terminal	Hi: Station detected (Vth=2.5V)
78	S METER	I	S-meter input from F/E	
79	NOISE	I	FM noise detection input	
80,81	NC	I		Not used(Pull down to GND lines)
82	CD SW2	I	12cm disc detection SW input	Lo: 12cm disc detected
83	M MUTE R	I	Mute request (R Ch.) from CD mechanism MI-COM.	Lo: Mute request
84	M MUTE L	I	Mute request (L Ch.) from CD mechanism MI-COM.	Lo: Mute request
85	CD SW3	I	Down & limit switch detection input	Hi: Chucking, Hi → Lo: Pickup most inner position
86	PANEL DET	I	Panel detection input	Lo: Panel attached, Hi: Panel detached
87	CH MUTE	I	Mute request from changers	Hi: Mute request
88	PHONE	I	PHONE detection input	1V or less: TEL MUTE, 2.5V or greater: NAVI MUTE
89	SC CON	O	Control output to the panel MI-COM.	Hi: Operation mode
90	SOURCE	I/O	SOURCE key detection input	Not used(N.C.)
91	CD SW1	I	Loading SW detection input	Lo: Loading start
92	CD SW4	I/O	8cm disc detection SW input	Not used(N.C.)
93	R CLK	I	Clock input from the RDS decoder IC	Except RDS, RBDS model: Not used(pull down to GND lines)
94	CH REQ	I	Communication request input from changers	Lo: Request
95	EJECT	I	EJECT key detection input	Lo: When EJECT key is pressed
96	SC REQ	I	Communication request input from the panel MI-COM.	Hi: Request
97	CH DATAC	I	Data input from changers	
98	CH DATAH	O	Data output to changers	
99	CH CLK	I/O	Clock input/output with changers	
100	SC DATA	I	Data input from the panel MI-COM.	



## TEST MODE

### 1. How to enter the test mode

While pressing and holding the Preset 1 and Preset 3 keys, reset the unit.

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

Reset the unit, ACC OFF, power OFF and Panel detached.  
(Note) The test mode cannot be terminated by 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
- BEEP : When pressing any keys, the buzzer generates a beep at any time.

### 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.
- When the number of total tracks of the MP3 disc or the WMA disc is less than 9, 1st track is played.

- When the model is equipped the CD mechanism assembly adapted for MP3 or MP3/WMA disc, the mechanism name and version number are displayed during the CD source selecting.
- When the disc media is CD, A short press of the Preset 1 key jumps to the track number 28.

### 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.
- Fader is selected to the initial item.
- 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 / 220Hz with the Track Up/Down keys.
- LPF is adjusted in 2 steps of Through / 120Hz 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 adjust.

### 8. Menu-related specifications

- Pressing the DNPP/SBF key on the remote initiates the Menu mode.
- Continuous holding of a remote control key is inhibited.
- In the case of the CD receiver model, A short press of the PLAY/PAUSE key initiates the Menu mode.

### 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 CD mechanism is not activated at this time.)

## TEST MODE

**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	Sireal number display (8 digits) (Display) SNo xxxxxxxx
PRESET 3	Short press : View power ON time. (The All OFF period is not counted.) Long press/hold : Clear power ON time at the power ON time displaying. (Display) PonTim xxxxx Max. 65535 (hours)
PRESET 4	Short press : Display CD operation time. Long press/hold : Clear CD operation time at the CD operation time displaying. (Display) CDTime xxxxx Max. 65535 (hours)
PRESET 5	Short press : Display CD ejection count. Long press/hold : Clear CD ejection count at the CD ejection count displaying. (Display) EjeCnt xxxxx Max. 65535 (times)
PRESET 6	Short press : Display Panel open/close count. Long press/hold : Clear Panel open/close count at the Panel open/close count. (Display) PnCnt xxxxxx Max. 655350 (times)

**11. Method of the span switching (K and M type only)**

While holding the Preset 1 and Preset 5 keys, reset the unit.

**12. Other specifications**

- No displays such as "CODE OFF" during Power-ON.
- Pressing the TI (AUTO) key during changer operation turns on 2zone. Cancel by pressing the TI (AUTO) key again. The P/S dot is lit during 2zone.
- In the case of 2 PREOUT model with Non Fader output, Each pressing and holding the ATT key for 1 second or more during All OFF, Non Fader output is switching Rear output or Non Fader output.
- In the case of 2 colors key illumination model, Each press the ATT key during All OFF, the key illumination is switching Green or Red.

**■ Security-related information****1. Forced Power ON mode (All models)**

Even when the security (Cord) 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 PLAY/PAUSE key to enter the Menu mode.
  3. When the message "Security" is displayed, press and hold the Track Up/Down key for 1 second to enter the security registration mode.
  4. Enter the code using the FM/AM/Track Up/Track Down keys.
    - FM key : Number up
    - AM key : Number down
    - Track Up key : Cursor right shift
    - Track Down key : Cursor left shift
  5. Hold down the Track Up key for at least 3 seconds and the message, "RE-ENTER" appears, so once again enter the code according to Step 4 above.
  6. Press and hold the Track Up key for 3 seconds until "APPROVED" is displayed.
  7. 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. Simple way to clear the security code (K type only)**

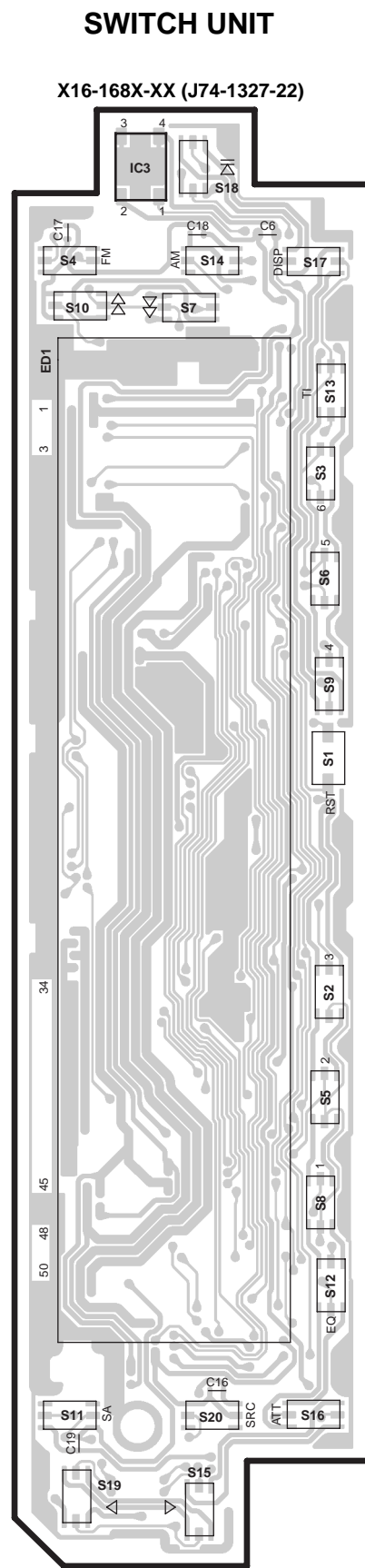
1. During code request mode, press the VOL UP key for at least 3 seconds while holding down the DISP key. (---- will disappear)
2. Enter, "KCAR" with the remote controller as described below. (Same as on 01 model.)
  - Press the remote controller 5 key twice, and press the Track Up key. (Enters a "K")
  - Press the remote controller 2 key three times, and press the Track Up key. (Enters a "C")
  - Press the remote controller 2 key once, and press the Track Up key. (Enters an "A")
  - Press the remote controller 7 key twice, and press the Track Up key. (Enters an "R")
3. Security function is canceled and unit sets to All-Off mode.
4. Code request mode appears if a mistake was made in entering the numbers.

# PC BOARD (Component Side View)

# PC BOARD (Foil Side View)

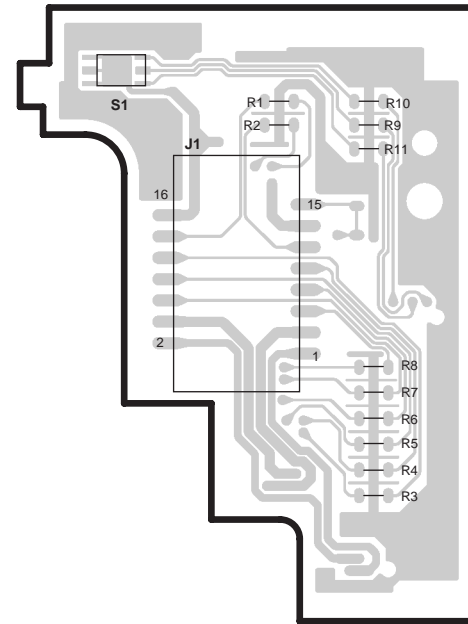
SWITCH UNIT (X16-168X-XX)

Ref. NO.	IC	Q	Address
3			2B



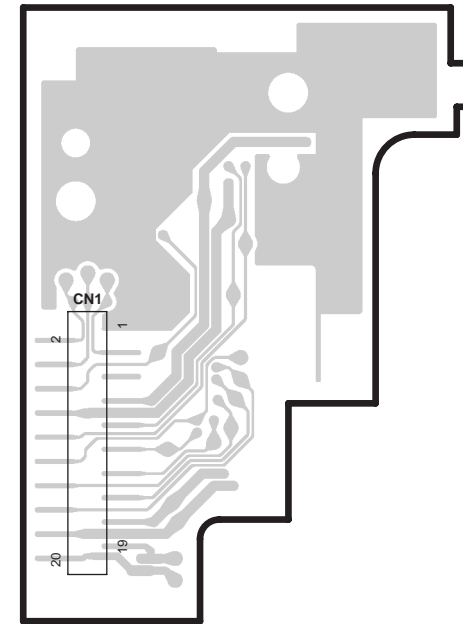
DAUGHTER UNIT

X89-253X-XX (J74-1332-12)



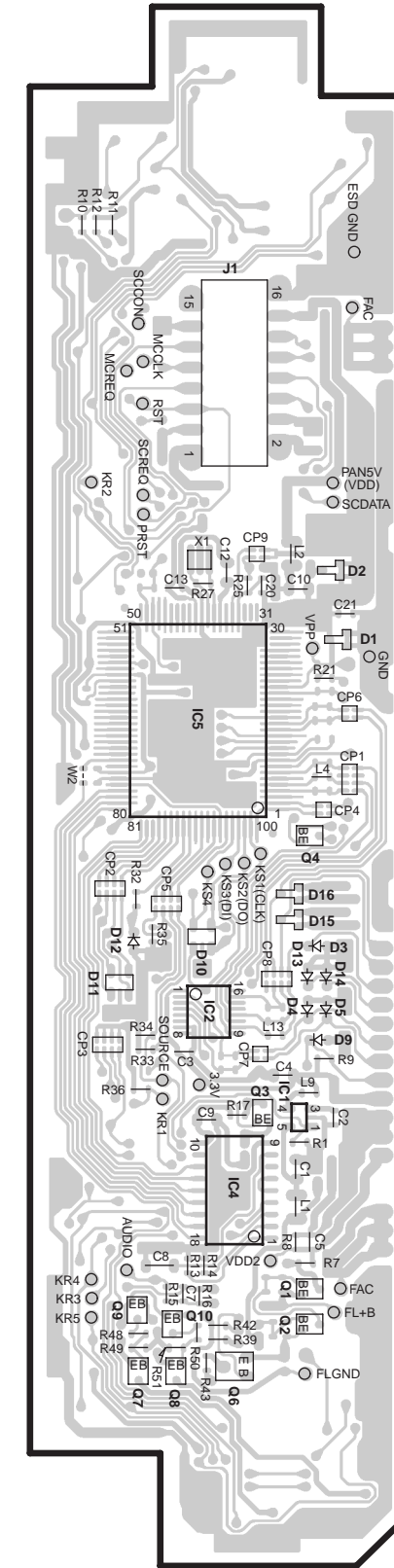
DAUGHTER UNIT

X89-253X-XX (J74-1332-12)



SWITCH UNIT

X16-168X-XX (J74-1327-22)



SWITCH UNIT (X16-168X-XX)

Ref. NO.	IC	Q	Address
1			5H
2			5H
4			6H
5			4H
	1		6H
	2		6H
	3		5H
	4		4H
	6		6H
	7		6G
	8		6G
	9		6G
	10		6H

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

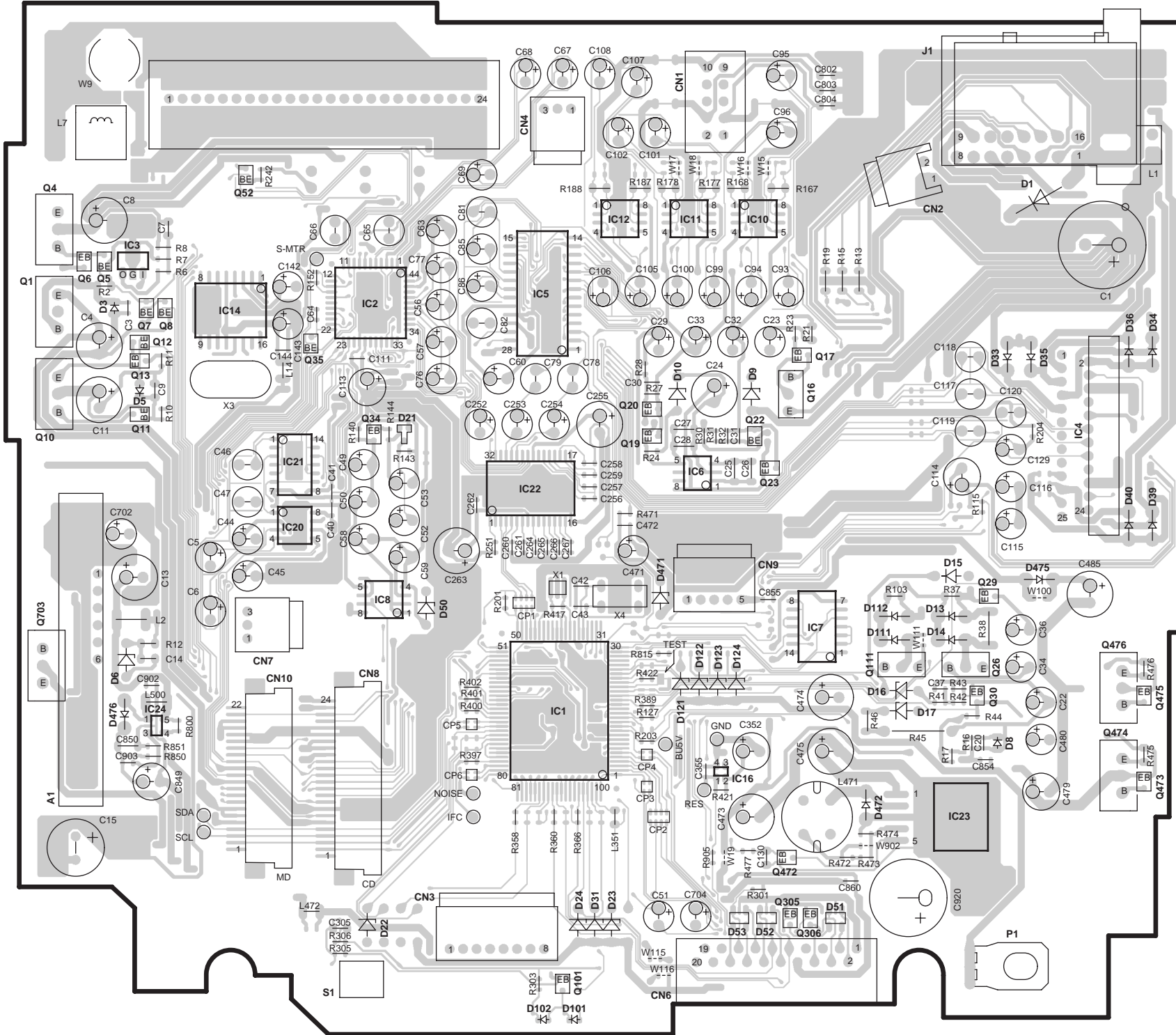
# PC BOARD (Component Side View)

## ELECTRIC UNIT

ELECTRIC UNIT  
(X25-9240-XX)

X25-9240-XX (J74-1328-22)

Ref. NO.	IC	Q	Address
1			5N
2			3M
3			3L
4			4Q
5			3N
6			4O
7			4O
8			4M
10			3O
11			3O
12			3N
16			5O
20			4M
21			4M
23			5P
1			3L
4			2L
5			3L
6			3L
7			3L
8			3L
10			4L
11			4L
12			3L
13			3L
16			3O
17			3O
19			4N
20			3N
22			3O
23			4O
26			5P
29			4P
30			5P
34			3M
35			3M
101			6N
111			5P
305			6O
306			6O
472			6O
473			5Q
474			5Q

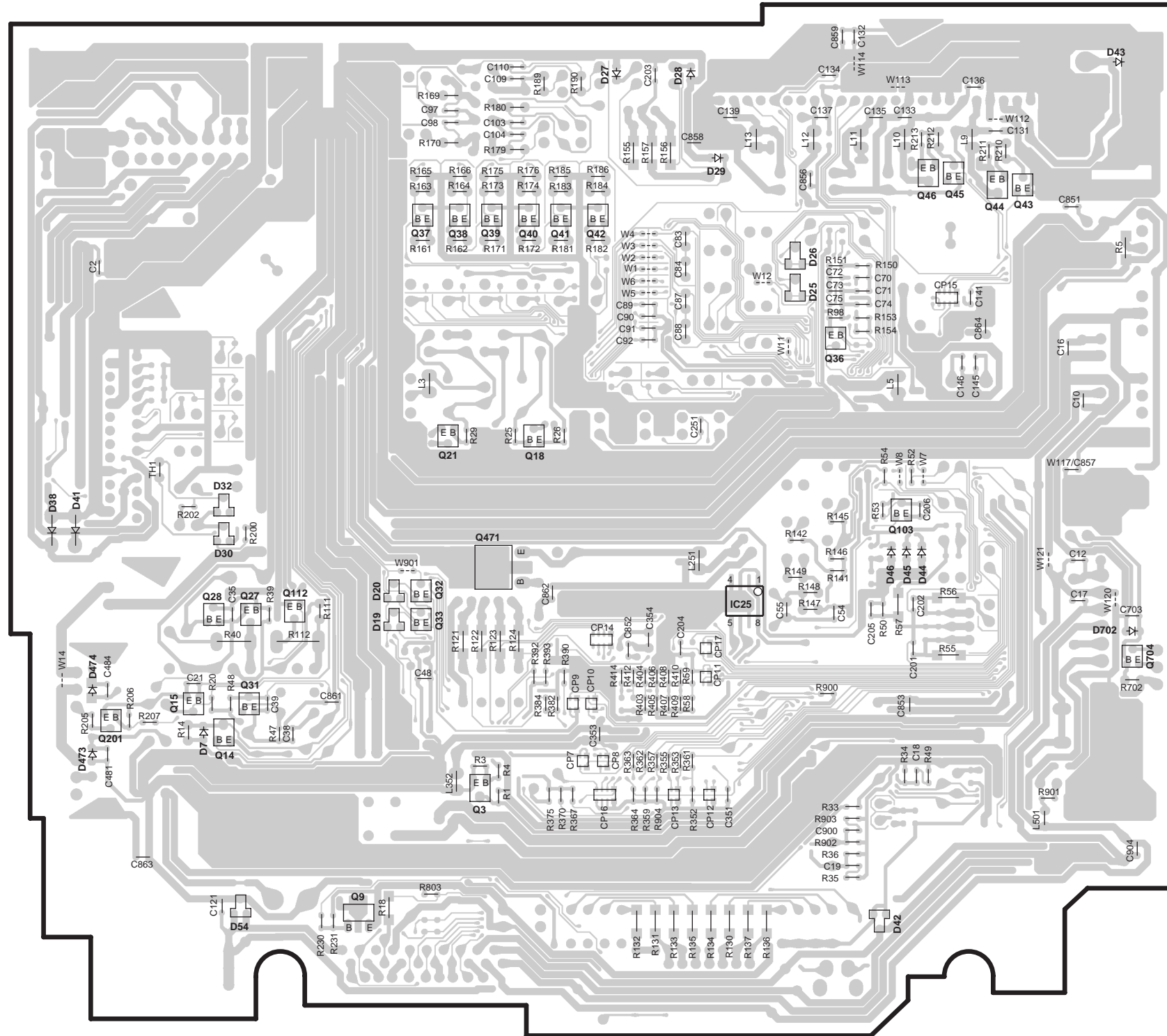


Refer to the schematic diagram for the values of resistors and capacitors.

# PC BOARD (Foil Side View)

## ELECTRIC UNIT

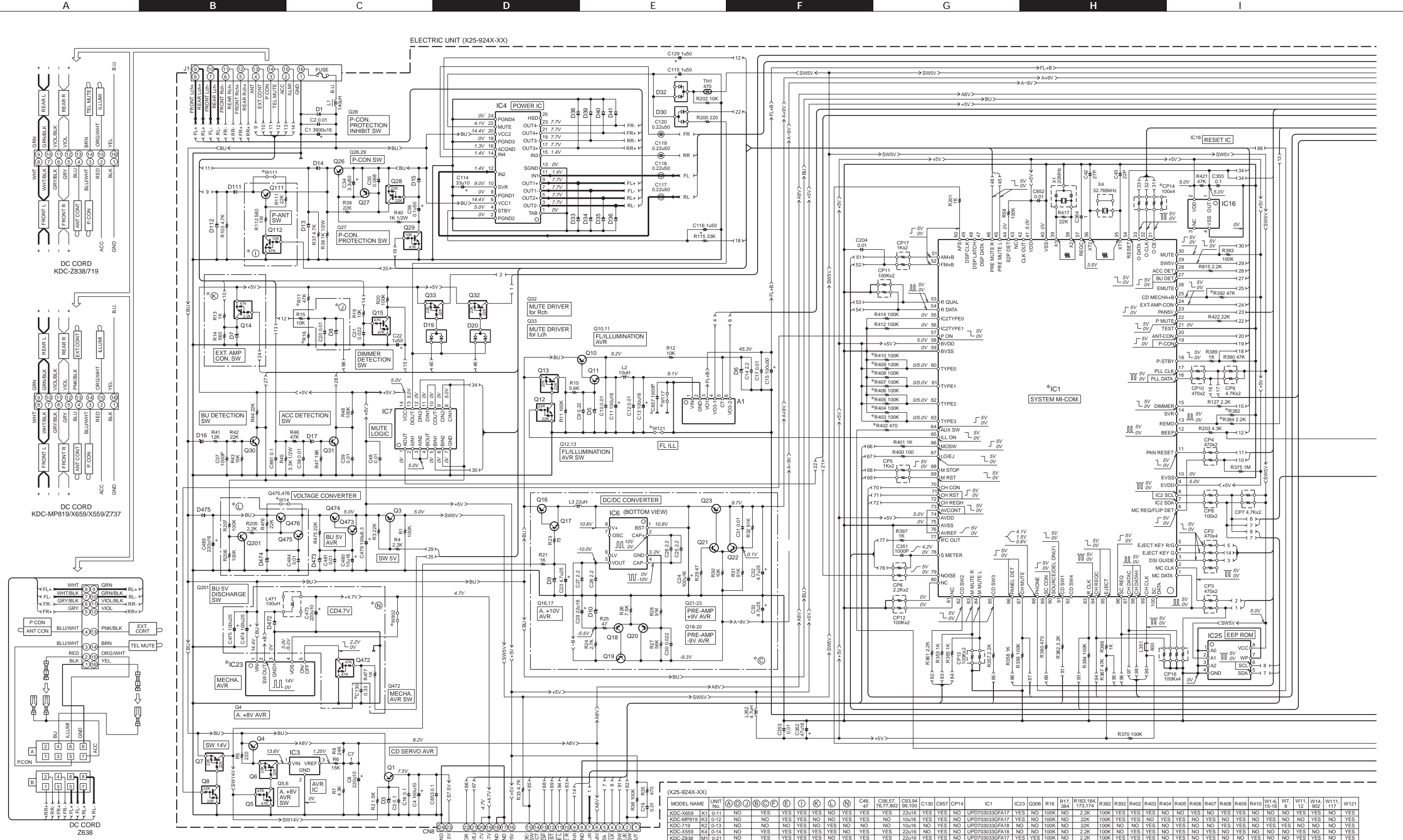
X25-9240-XX (J74-1328-22)



## ELECTRIC UNIT (X25-9240-XX)

Ref. NO.	IC	Q	Address
25			4W
		3	5V
		9	6V
		14	5U
		15	5U
		18	4V
		21	4V
		27	4U
		28	4U
		31	5U
		32	4V
		33	4V
		36	3X
		37	3V
		38	3V
		39	3V
		40	3V
		41	3W
		42	3W
		43	2Y
		44	2Y
		45	2X
		46	2X
		103	4X
		112	4U

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



MODEL NAME	UNIT No.	A	J	B	C	F	E	I	K	L	N	C46, 47	C56,57	C93,94	C130	C857	CP14	IC1	IC23	Q306	R16	R17, 38A	R163,164, 172,174	R382	R392	R402	R403	R404	R405	R406	R407	R408	R409	R410	W1-6, 15-18	W7, 8	W11, 12	W14, 117	W111, 112	W121															
KDC-X659	K1	0-11	NO	YES	YES	YES	YES	NO	YES	YES	NO	YES	YES	22u16	YES	YES	NO	UPD703033GFA17	YES	NO	100K	NO	2.2K	100K	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO									
KDC-MP189	K3	0-12	NO	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	UPD703033GFA17	YES	NO	100K	NO	NO	100K	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO					
KDC-719	K2	0-13	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	10u16	NO	NO	NO	UPD703033GFA18	NO	NO	100K	NO	2.2K	100K	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO				
KDC-X559	K4	0-14	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	22u16	NO	NO	NO	UPD703033GFA18	NO	NO	100K	NO	2.2K	100K	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		
KDC-2938	M1	0-21	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	22u16	YES	YES	NO	UPD703033GFA17	YES	YES	100K	NO	2.2K	100K	YES	YES	YES	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
KDC-Z737	M2	0-22	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	10u16	NO	NO	NO	UPD703033GFA18	NO	YES	100K	NO	2.2K	100K	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Z638	E1	2-71	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	10u16	NO	NO	NO	UPD703033GFA18	NO	YES	22K	YES	2.2K	2.2M	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

**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.

DTA123JK UN511  
DTA144EUA UN514  
DTC114YK UN5211  
DTC114YUA UN5213  
DTC143TUA UN5214

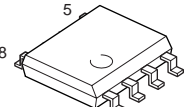
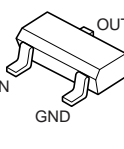
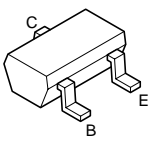
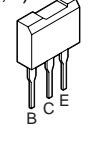
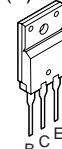
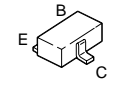
UN5216  
2SA1576A

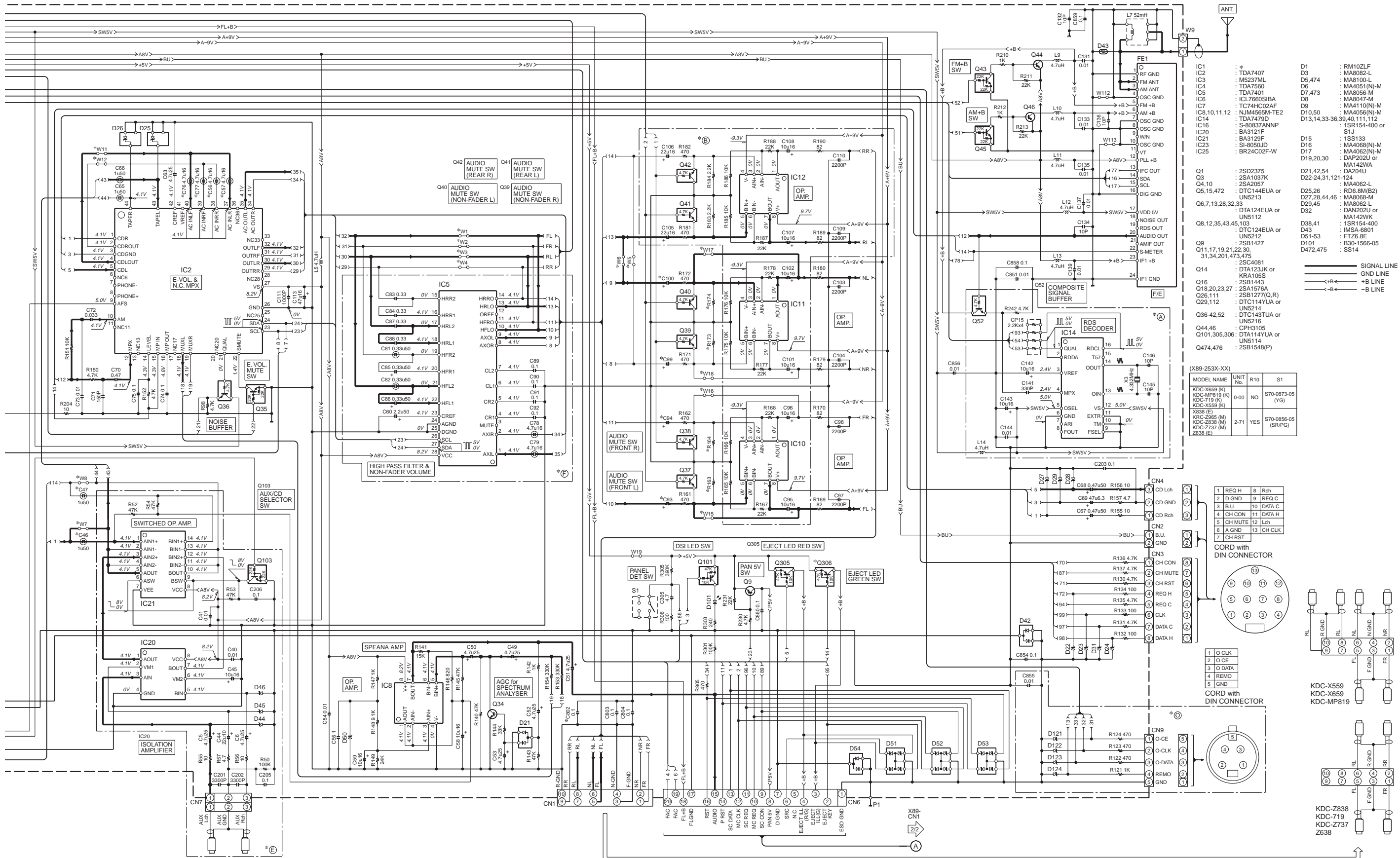
2SB1548(P)  
2SB1277(Q,R)  
2SB1443

2SA1037K  
2SC4081

DTA114EUA  
DTA124EUA  
DTC124EUA  
DTC144EUA

NJM4565M-TE2

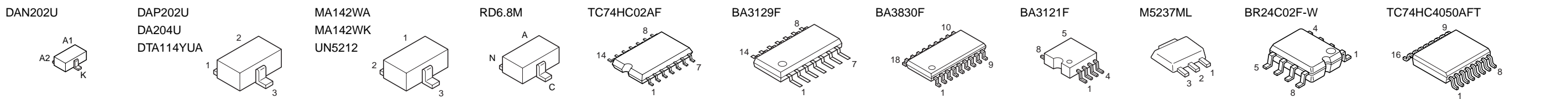
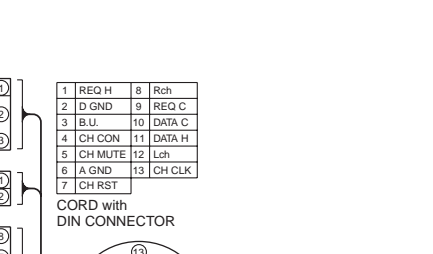


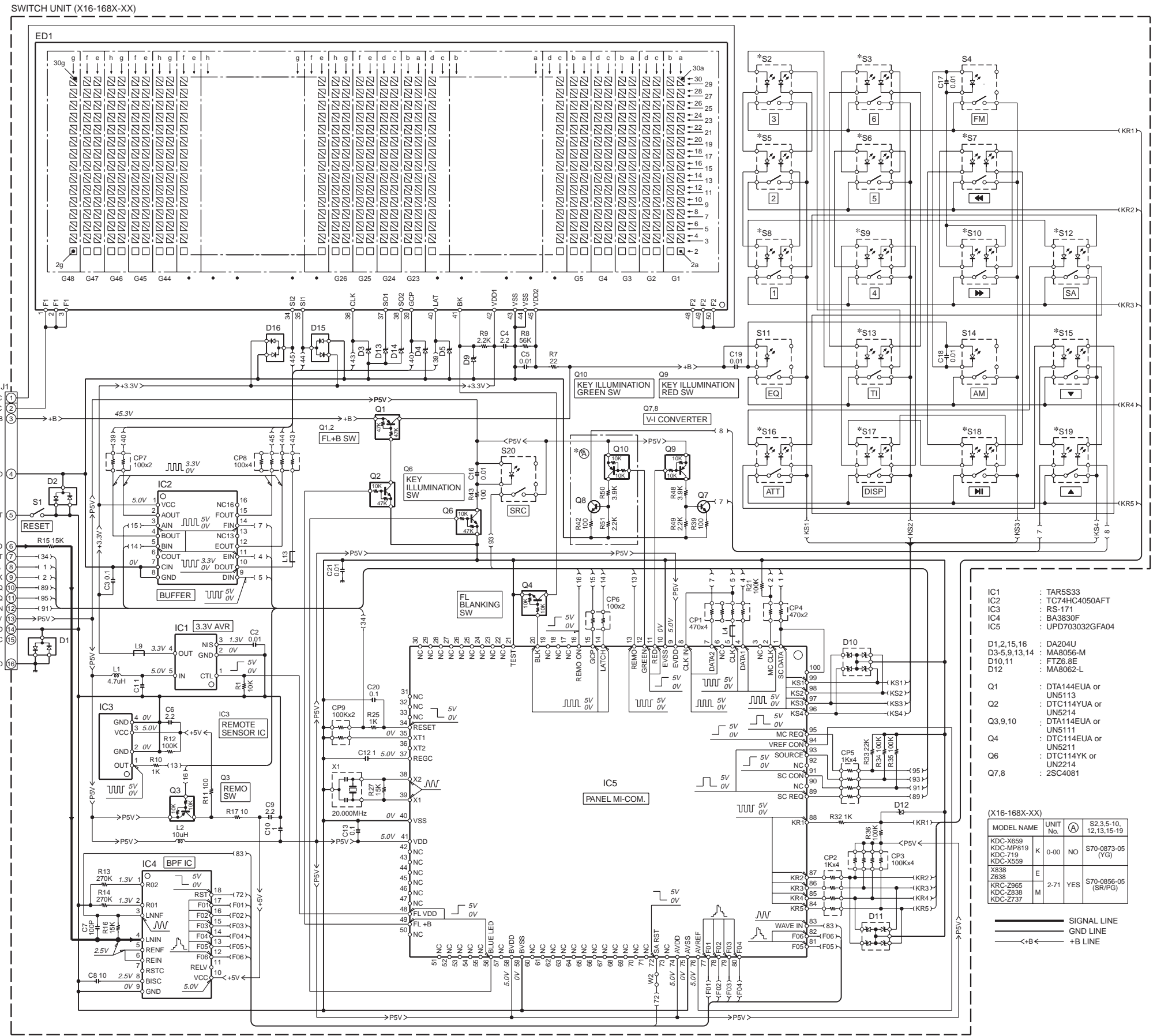


- IC1 : TDA7407  
 IC2 : M5237ML  
 IC3 : TDA7560  
 IC4 : TDA7401  
 IC5 : ICL7660SIBA  
 IC6 : TC74HC02AF  
 IC7 : NUM4565M-TE2  
 IC8,10,11,12 : TDA749D  
 IC9 : S-80837ANNP  
 IC10 : BA3121F  
 IC11 : BA3129F  
 IC12 : SI-8050JD  
 IC13 : BR24C02F-W  
 IC14 : RM10ZLF  
 IC15 : MA8082-L  
 IC16 : MA8100-L  
 IC17 : MA8051(N)-M  
 IC18 : MA8056-M  
 IC19 : MA8047-M  
 IC20 : MA4110(N)-M  
 IC21 : MA4056(N)-M  
 IC22 : 1SR154-400 or SIJ  
 IC23 : 1SS133  
 IC24 : MA4068(N)-M  
 IC25 : MA4062(N)-M  
 IC26 : DAP202U or SIJ  
 IC27 : MA142WA  
 IC28 : DA204U  
 IC29 : D22-24,31,121-124  
 IC30 : MA4062-L  
 IC31 : RD6.8M(B2)  
 IC32 : MA8068-M  
 IC33 : DAN202U or SIJ  
 IC34 : MA142WK  
 IC35 : 1SR154-400  
 IC36 : 1MSA-6801  
 IC37 : F7ZS.8E  
 IC38 : B30-1566-05  
 IC39 : D472.475  
 IC40 : SS14

Q1 : 2SD2375  
 Q3 : 2SA1037K  
 Q4,10 : 2SA2057  
 Q5,15,472 : DTC124EUA or UN5213  
 Q6,7,13,28,32,33 : DTA124EUA or UN5112  
 Q8,12,35,43,45,103 : DTC124EUA or UN5212  
 Q9 : 2SB1427  
 Q11,17,19,21,22,30,31,34,201,473,475 : 2SC4081  
 Q14 : DTA123JK or KRA1055  
 Q16 : 2SB1443  
 Q18,20,23,27 : 2SA1576A  
 Q26,111 : 2SB1277(Q,R)  
 Q29,112 : DTC114YUA or UN5214  
 Q36-42,52 : DTC143TUA or UN5216  
 Q44,46 : CPH3105  
 Q101,305,306 : DTA114YUA or UN5114  
 Q474,476 : 2SB1548(P)

MODEL NAME	UNIT No.	R10	S1
KDC-X659 (K)	0-00	NO	S70-0873-05 (YG)
KDC-MP819 (K)			
KDC-719 (K)			
KDC-X559 (K)			
X638 (E)			
KRC-Z865 (M)	2-71	YES	S70-0866-05 (SR/PG)
KDC-Z838 (M)			
KDC-Z737 (E)			
Z638 (E)			





- IC1 : TAR5S33
- IC2 : TC74HC4050AFT
- IC3 : RS-171
- IC4 : BA3830F
- IC5 : UPD703032GFA04
- D1,2,15,16 : DA204U
- D3-5,9,13,14 : MA8056-M
- D10,11 : FTZ6.8E
- D12 : MA8062-L
- Q1 : DTA144EUA or UN5113
- Q2 : DTC114YUA or UN5214
- Q3,9,10 : DTA114EUA or UN5111
- Q4 : DTC114EUA or UN5211
- Q6 : DTC114YK or UN2214
- Q7,8 : 2SC4081

(X16-168X-XX)				
MODEL NAME	UNIT No.	Ⓐ	S2.3.5-10, 12,13,15-19	
KDC-X659				
KDC-MP819	K	0-00	NO S70-0873-05 (YG)	
KDC-719				
KDC-X559				
X838 Z638	E			
KRC-Z965				
KDC-Z638	M	2-71	YES S70-0856-05 (SR/PG)	
KDC-Z737				

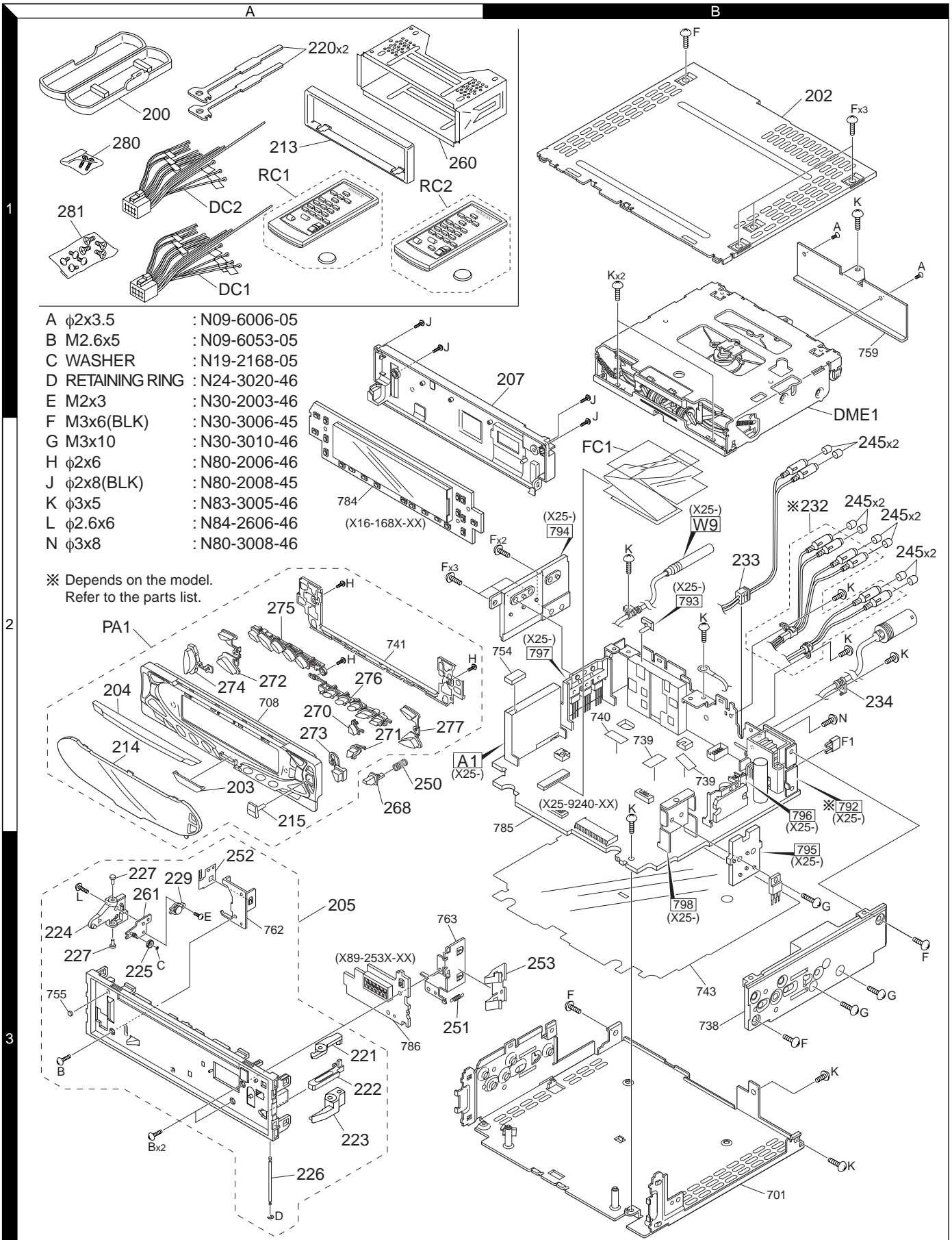
— SIGNAL LINE  
 — GND LINE  
 — +B LINE

**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.



## EXPLODED VIEW



# KDC-MP819/X659/Z838

## 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.	A d d	N e w	Parts No.	Description	Dest inati on
<b>KDC-MP819/X659/Z838</b>					
200	1A	*	A02-2712-13	PLASTIC CABINET ASSY	
202	1B	*	A52-0811-12	TOP PLATE	
203	2A	*	A21-4175-04	DRESSING PANEL	
204	2A	*	A21-4184-02	DRESSING PANEL	K1
204	2A	*	A21-4209-02	DRESSING PANEL	K3,M1
205	3A	*	A22-2946-12	SUB PANEL ASSY	
207	1B	*	A46-1756-11	REAR COVER	
PA1	2A	*	A64-2643-11	PANEL ASSY	K1
PA1	2A	*	A64-2644-11	PANEL ASSY	K3
PA1	2A	*	A64-2649-11	PANEL ASSY	M1
RC1	1A	*	A70-2025-05	REMOTE CONTROLLER ASSY(RC-410)	K1,M1
RC2	1A	*	A70-2026-05	REMOTE CONTROLLER ASSY(RC-420)	K3
213	1A	*	B07-3050-02	ESCUTCHEON (SIL)	K3,M1
213	1A	*	B07-3057-02	ESCUTCHEON (BLK)	K1
214	2A	*	B10-4206-01	FRONT GLASS	K1
214	2A	*	B10-4207-01	FRONT GLASS	K3
214	2A	*	B10-4212-01	FRONT GLASS	M1
215	2A	*	B10-4217-04	FRONT GLASS	
-			B46-0100-50	WARRANTY CARD	
-			B46-0606-04	ID CARD	K1,M1
-			B46-0612-14	ID CARD	K3
-			B46-0645-03	USER CARD	K1,M1
-			B46-0648-03	USER CARD	K1
-			B58-1365-04	CAUTION CARD	
-			B64-2176-00	INST. MANUAL (ENGLISH)	K1,M1
-		*	B64-2177-00	INST. MANUAL (FRE,SPA)	K1,M1
-		*	B64-2178-00	INST. MANUAL (ENG,T-CHI)	K3
220	1A	*	D10-4674-04	LEVER	
221	3A	*	D10-4675-04	LEVER	
222	3A	*	D10-4676-04	LEVER	
223	3A	*	D10-4677-04	LEVER	
224	3A	*	D10-4678-03	LEVER	
225	3A	*	D13-2242-04	GEAR	
226	3A	*	D21-2406-04	SHAFT	
227	3A	*	D21-2407-04	SHAFT	
229	3A	*	D39-0237-05	DAMPER	
232	2B	*	E30-6064-05	CORD WITH PINPLUG (6P)	K1,K3
232	2B	*	E30-6065-05	CORD WITH PINPLUG (4P)	M1
233	2B	*	E30-6067-15	CORD WITH PINPLUG (AUX 2P)	
234	2B	*	E30-6068-05	CORD WITH DIN CONNECTOR (13P)	
△ DC1	1A	*	E30-6062-05	DC CORD	K1,K3
△ DC2	1A	*	E30-6106-05	DC CORD	M1
FC1	2B	*	E39-0447-05	FLAT CABLE (24P)	
245	2B	*	F29-0049-05	INSULATING COVER	
△ F1	2B	*	F52-0006-05	FUSE(MINI BLADE TYPE) (10A)	
△ F1	2B	*	F52-0011-05	FUSE(MINI BLADE TYPE) (10A)	
250	2A	*	G01-3135-04	COMPRESSION SPRING (OPEN)	
251	3A	*	G01-3136-14	EXTENSION SPRING	
252	3A	*	G02-1428-04	FLAT SPRING	
253	3B	*	G02-1429-04	FLAT SPRING	
-	*		H10-4802-12	POLYSTYRENE FOAMED FIXTURE	

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
-			H25-0329-04	PROTECTION BAG (280X450X0.03)	
-			H25-0337-04	PROTECTION BAG (180X300X0.03)	
-	*		H54-2317-03	ITEM CARTON CASE	K1
-	*		H54-2318-03	ITEM CARTON CASE	K3
-	*		H54-2323-03	ITEM CARTON CASE	M1
260	1A	*	J21-9823-03	MOUNTING HARDWARE ASSY	
261	3A	*	J21-9831-04	MOUNTING HARDWARE ASSY	
268	2A	*	K24-3837-04	KNOB (OPEN)	
270	2A	*	K24-3850-04	KNOB (SKIP UP)	K3,M1
270	2A	*	K24-3852-04	KNOB (SKIP UP)	K1
271	2A	*	K24-3851-04	KNOB (SKIP DOWN)	K3,M1
271	2A	*	K24-3853-04	KNOB (SKIP DOWN)	K1
272	2A	*	K25-1417-13	KNOB (EQ, SRC)	
273	2A	*	K25-1418-03	KNOB (PAUSE)	
274	2A	*	K25-1423-03	KNOB (VOL)	
275	2A	*	K25-1428-03	KNOB (PRE1-3, ATT, Q)	K1
275	2A	*	K25-1456-03	KNOB (PRE1-3)	K3,M1
276	2A	*	K25-1429-03	KNOB (PRE4-6, AUTO, DISP)	K1
276	2A	*	K25-1457-03	KNOB (PRE4-6)	K3,M1
277	2A	*	K25-1458-13	KNOB (FM, AM)	K1, K3
277	2A	*	K25-1459-13	KNOB (FM, AM)	M1
280	1A		N99-1656-05	SCREW SET	
281	1A		N99-1723-05	SCREW SET	
A	1B		N09-6006-05	TAPTITE SCREW (PAN ST 2X3.5T)	
B	3A	*	N09-6053-05	MACHINE SCREW (M2.6X5)	
C	3A	*	N19-2168-05	FLAT WASHER (1.4X3.0X0.25)	
D	3A		N24-3020-46	E TYPE RETAINING RING (2X5X1.7)	
E	3A		N30-2003-46	PAN HEAD MACHINE SCREW	
F	1B		N30-3006-45	PAN HEAD MACHINE SCREW	
G	3B		N30-3010-46	PAN HEAD MACHINE SCREW	
H	2A		N80-2006-46	PAN HEAD TAPTITE SCREW	
J	1A		N80-2008-45	PAN HEAD TAPTITE SCREW	
K	1B		N83-3005-46	PAN HEAD TAPTITE SCREW	
L	3A		N84-2606-46	PAN HEAD TAPTITE SCREW	
DME1	1B	*	X92-4460-01	MECHANISM ASSY (DXM-6401W)	
<b>SWITCH UNIT (X16-168X-XX)</b>					
C1			CK73FB1A105K	CHIP C 1.0UF K	
C2			CK73GB1H103K	CHIP C 0.010UF K	
C3			CK73GB1C104K	CHIP C 0.10UF K	
C4			CK73FB1A225K	CHIP C 2.2UF K	
C5			CK73GB1H103K	CHIP C 0.010UF K	
C6			CK73FB1A225K	CHIP C 2.2UF K	
C7			CC73GCH1H101J	CHIP C 100PF J	
C8			CK73EB0J106K	CHIP C 10UF K	
C9			CK73FB1A225K	CHIP C 2.2UF K	
C10			CK73FB1A105K	CHIP C 1.0UF K	
C12			CK73FB1A105K	CHIP C 1.0UF K	
C13			CK73GB1C104K	CHIP C 0.10UF K	
C16-19			CK73GB1H103K	CHIP C 0.010UF K	
C20			CK73GB1H104K	CHIP C 0.10UF K	
C21			CK73GB1H103K	CHIP C 0.010UF K	
J1			E59-0829-05	RECTANGULAR PLUG (16P)	

K1 : KDC-X659    K3 : KDC-MP819    M1 : KDC-Z838

△ indicates safety critical components.

## PARTS LIST

\* New Parts

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

Teile ohne Parts No. werden nicht geliefert.

### SWITCH UNIT (X16-168X-XX)

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
L1			L40-4795-68	SMALL FIXED INDUCTOR (4.7UH)	
L2		*	L40-1005-68	SMALL FIXED INDUCTOR (10UH)	
L4			L92-0332-05	CHIP FERRITE	
L9			L92-0332-05	CHIP FERRITE	
L13			L92-0332-05	CHIP FERRITE	
X1			L78-0821-05	RESONATOR (20.0MHZ)	
CP1			R90-1016-05	MULTI-COMP 470 X4	
CP2			R90-0724-05	MULTI-COMP 1K X4	
CP3			R90-0720-05	MULTI-COMP 100K X4	
CP4			R90-1022-05	MULTI-COMP 470 X2	
CP5			R90-0724-05	MULTI-COMP 1K X4	
CP6,7			R90-1019-05	MULTI-COMP 100 X2	
CP8			R90-1014-05	MULTI-COMP 100 X4	
CP9			R90-0737-05	MULTI-COMP 100K X2	
R1			RK73GB2A103J	CHIP R 10K J 1/10W	
R7		*	RK73GB2A220J	CHIP R 22 J 1/10W	
R8			RK73GB2A563J	CHIP R 56K J 1/10W	
R9			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R10			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R11			RK73GB2A101J	CHIP R 100 J 1/10W	
R12			RK73GB2A104J	CHIP R 100K J 1/10W	
R13,14		*	RK73GB2A274J	CHIP R 270K J 1/10W	
R15,16			RK73GB2A153J	CHIP R 15K J 1/10W	
R17			RK73GB2A100J	CHIP R 10 J 1/10W	
R21			RK73GB2A104J	CHIP R 100K J 1/10W	
R25			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R27			RK73GB2A153J	CHIP R 15K J 1/10W	
R32			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R33			RK73GB2A223J	CHIP R 22K J 1/10W	
R34-36			RK73GB2A104J	CHIP R 100K J 1/10W	
R39			RK73GB2A101J	CHIP R 100 J 1/10W	
R42			RK73GB2A101J	CHIP R 100 J 1/10W	M1
R43			RK73GB2A101J	CHIP R 100 J 1/10W	
R48			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R49			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R50			RK73GB2A392J	CHIP R 3.9K J 1/10W	M1
R51			RK73GB2A222J	CHIP R 2.2K J 1/10W	M1
W2			R92-1252-05	CHIP R 0 OHM J 1/16W	
S1			S70-0863-05	TACT SWITCH	
S2,3			S70-0856-05	TACT SWITCH	M1
S2,3			S70-0873-05	TACT SWITCH	K1,K3
S4			S70-0857-05	TACT SWITCH	
S5-10			S70-0856-05	TACT SWITCH	M1
S5-10			S70-0873-05	TACT SWITCH	K1,K3
S11			S70-0857-05	TACT SWITCH	
S12,13			S70-0856-05	TACT SWITCH	M1
S12,13			S70-0873-05	TACT SWITCH	K1,K3
S14			S70-0857-05	TACT SWITCH	
S15-19			S70-0856-05	TACT SWITCH	M1
S15-19			S70-0873-05	TACT SWITCH	K1,K3
S20			S70-0857-05	TACT SWITCH	
D1,2			DA204U	DIODE	
D3-5			MA8056-M	ZENER DIODE	

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
D9			MA8056-M	ZENER DIODE	
D10,11			FTZ6.8E	ZENER DIODE	
D12			MA8062-L	ZENER DIODE	
D13,14			MA8056-M	ZENER DIODE	
D15,16			DA204U	DIODE	
ED1		*	CN2034M	FLUORESCENT INDICATOR TUBE	
IC1		*	TAR5S33	ANALOGUE IC	
IC2			TC74HC4050AFT	MOS-IC	
IC3			RS-171	ANALOGUE IC	
IC4			BA3830F	ANALOGUE IC	
IC5		*	UPD703032GFA04	MI-COM IC	
Q1			DTA144EUA	DIGITAL TRANSISTOR	
Q1			UN5113	DIGITAL TRANSISTOR	
Q2			DTC114YUA	DIGITAL TRANSISTOR	
Q2			UN5214	DIGITAL TRANSISTOR	
Q3			DTA114EUA	DIGITAL TRANSISTOR	
Q3			UN5111	DIGITAL TRANSISTOR	
Q4			DTC114EUA	DIGITAL TRANSISTOR	
Q4			UN5211	DIGITAL TRANSISTOR	
Q6			DTC114YK	DIGITAL TRANSISTOR	
Q6			UN2214	DIGITAL TRANSISTOR	
Q7			2SC4081	TRANSISTOR	
Q8			2SC4081	TRANSISTOR	M1
Q9			DTA114EUA	DIGITAL TRANSISTOR	K1,K3
Q9			UN5111	DIGITAL TRANSISTOR	K1,K3
Q9,10			DTA114EUA	DIGITAL TRANSISTOR	M1
Q9,10			UN5111	DIGITAL TRANSISTOR	M1
<b>ELECTRIC UNIT (X25-9240-XX)</b>					
D101			B30-1566-05	LED (1608,RED)	
C1			C90-2822-05	ELECTRO 3900UF 16WV	K3,M1
C1			C90-5377-05	ELECTRO 3900UF 16WV	K1
C2			CK73GB1H103K	CHIP C 0.010UF K	
C3			CK73GB1C104K	CHIP C 0.10UF K	
C4		*	C90-5442-05	ELECTRO 100UF 10WV	
C5,6			CE04NW1E4R7M	ELECTRO 4.7UF 25WV	
C7			CK73FB1C105K	CHIP C 1.0UF K	
C8			CE04DW1A221M	ELECTRO 220UF 10WV	
C9			CK73FB1C224K	CHIP C 0.22UF K	
C10			CK73GB1H103K	CHIP C 0.010UF K	
C11			C90-2966-05	ELECTRO 100UF 16WV	
C12			CK73GB1H103K	CHIP C 0.010UF K	
C13			C90-2966-05	ELECTRO 100UF 16WV	
C14			CK73FB1A225K	CHIP C 2.2UF K	
C15			C90-2979-05	ELECTRO 100UF 50WV	
C16			CK73GB1C104K	CHIP C 0.10UF K	
C17			CK73GB1H103K	CHIP C 0.010UF K	
C19			CK73GB1H103K	CHIP C 0.010UF K	
C21			CK73GB1E223K	CHIP C 0.022UF K	
C22			C90-2558-05	ELECTRO 1.0UF 50WV	
C23			CE04NW1E4R7M	ELECTRO 4.7UF 25WV	K1,M1
C24			C90-2966-05	ELECTRO 100UF 16WV	K1,M1
C25-28			CK73EB1C225K	CHIP C 2.2UF K	K1,M1
C29			CE04NW1C220M	ELECTRO 22UF 16WV	K1,M1
C30			CK73GB1E223K	CHIP C 0.022UF K	K1,M1

K1 : KDC-X659 K3 : KDC-MP819 M1 : KDC-Z838

⚠ indicates safety critical components.

## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

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Teile ohne Parts No. werden nicht geliefert.

### ELECTRIC UNIT (X25-9240-XX)

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
C31			CK73GB1H103K	CHIP C 0.010UF K	K1,M1
C32,33			CE04NW1E4R7M	ELECTRO 4.7UF 25WV	K1,M1
C34			C90-2556-05	ELECTRO 3.3UF 50WV	
C35			CK73GB1C683K	CHIP C 0.068UF K	
C36			C90-2562-05	ELECTRO 0.10UF 50WV	
C37			CK73GB1H102K	CHIP C 1000PF K	
C38-41			CK73GB1H103K	CHIP C 0.010UF K	
C42			CC73GCH1H270J	CHIP C 27PF J	
C43			CC73GCH1H220J	CHIP C 22PF J	
C44			CE04NW1A220M	ELECTRO 22UF 10WV	
C45			CE04NW1C100M	ELECTRO 10UF 16WV	
C46,47			C90-2658-05	NP-ELEC 1.0UF 50WV	
C48			CK73GB1H103K	CHIP C 0.010UF K	
C49-53		*	C90-5444-05	ELECTRO 4.7UF 25WV	
C54			CK73GB1H103K	CHIP C 0.010UF K	
C55			CK73FB1C105K	CHIP C 1.0UF K	
C56,57			C90-2524-05	NP-ELEC 4.7UF 16WV	K1,M1
C58			CE04NW1C100M	ELECTRO 10UF 16WV	
C59			CE04MW1C100M	ELECTRO 10UF 16WV	
C60			CE04NW1H2R2M	ELECTRO 2.2UF 50WV	K1,M1
C63		*	CE04NW1E4R7MEL	ELECTRO 4.7UF 25WV	
C65,66			C90-2658-05	NP-ELEC 1.0UF 50WV	
C67,68			CE04NW1HR47M	ELECTRO 0.47UF 50WV	
C69			CE04NW0J470M	ELECTRO 47UF 6.3WV	
C70			CK73GB1A474K	CHIP C 0.47UF K	
C71			CC73GCH1H151J	CHIP C 150PF J	
C72			CK73GB1E333K	CHIP C 0.033UF K	
C73			CK73GB1H103K	CHIP C 0.010UF K	
C74,75			CK73GB1C104K	CHIP C 0.10UF K	
C76-79			C90-2524-05	NP-ELEC 4.7UF 16WV	K1,M1
C81,82		*	C90-5429-05	NP-ELEC 0.33UF 50WV	K1,M1
C83,84			CK73FB1C334K	CHIP C 0.33UF K	K1,M1
C85,86			CE04NW1HR33M	ELECTRO 0.33UF 50WV	K1,M1
C87,88			CK73FB1C334K	CHIP C 0.33UF K	K1,M1
C89-92			CK73GB1C104K	CHIP C 0.10UF K	K1,M1
C93,94			CE04NW1C100M	ELECTRO 10UF 16WV	K3
C93,94			CE04NW1C220M	ELECTRO 22UF 16WV	K1,M1
C95,96			CE04NW1C100M	ELECTRO 10UF 16WV	K1,M1
C97,98			CK73GB1H222K	CHIP C 2200PF K	
C99,100			CE04NW1C100M	ELECTRO 10UF 16WV	K3
C99,100			CE04NW1C220M	ELECTRO 22UF 16WV	K1,M1
C101,102			CE04NW1C100M	ELECTRO 10UF 16WV	K1,M1
C103,104			CK73GB1H222K	CHIP C 2200PF K	
C105,106			CE04NW1C220M	ELECTRO 22UF 16WV	K1,M1
C107,108			CE04NW1C100M	ELECTRO 10UF 16WV	K1,M1
C109,110			CK73GB1H222K	CHIP C 2200PF K	K1,M1
C111			CK73GB1H102K	CHIP C 1000PF K	
C113			CE04NW1C470M	ELECTRO 47UF 16WV	
C114			C90-2551-05	ELECTRO 33UF 10WV	
C115,116			C90-2558-05	ELECTRO 1.0UF 50WV	
C117-120			C90-5297-05	NP-ELECT 0.22UF 50WV	
C129			C90-5308-05	ELECTRO 1.0UF 50WV	
C130			CK73FB1C334K	CHIP C 0.33UF K	
C131			CK73GB1H103K	CHIP C 0.010UF K	
C132			CC73GCH1H100D	CHIP C 10PF D	

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
C133			CK73GB1H103K	CHIP C 0.010UF K	
C134			CC73GCH1H100D	CHIP C 10PF D	
C135			CK73GB1H103K	CHIP C 0.010UF K	
C136			CC73GCH1H100D	CHIP C 10PF D	
C137			CK73GB1H103K	CHIP C 0.010UF K	
C139			CK73GB1H103K	CHIP C 0.010UF K	
C201,202			CK73GB1H332K	CHIP C 3300PF K	
C203			CK73GB1H104K	CHIP C 0.10UF K	
C204			CK73GB1H103K	CHIP C 0.010UF K	
C205			CK73GB1H104K	CHIP C 0.10UF K	
C206			CK73GB1C104K	CHIP C 0.10UF K	
C305			CK73FB0J475K	CHIP C 4.7UF K	
C351			CK73GB1H102K	CHIP C 1000PF K	
C352		*	C90-5443-05	ELECTRO 47UF 16WV	
C353			CK73GB1H103K	CHIP C 0.010UF K	
C354			CK73FB1C105K	CHIP C 1.0UF K	
C355			CK73GB1C104K	CHIP C 0.10UF K	
C473			C90-2965-05	ELECTRO 220UF 10WV	
C474,475			C90-2963-05	ELECTRO 100UF 25WV	
C479			C90-2547-05	ELECTRO 100UF 6.3WV	
C480			C90-2554-05	ELECTRO 10UF 16WV	
C481			CK73GB1H103K	CHIP C 0.010UF K	
C485			C90-2980-05	ELECTRO 220UF 16WV	
C802			CK73FB1H104K	CHIP C 0.10UF K	K1,M1
C803,804			CK73FB1H104K	CHIP C 0.10UF K	
C851,852			CK73GB1H103K	CHIP C 0.010UF K	
C853,854			CK73GB1H104K	CHIP C 0.10UF K	
C856			CK73GB1H103K	CHIP C 0.010UF K	
C857			CK73GB1H102K	CHIP C 1000PF K	
C858-861			CK73GB1H104K	CHIP C 0.10UF K	
C900			CK73GB1H103K	CHIP C 0.010UF K	
CN1		*	E41-0174-05	PIN ASSY (10P)	
CN2			E40-3299-05	PIN ASSY (2P)	
CN3			E40-3266-05	PIN ASSY (8P)	
CN4			E40-3261-05	PIN ASSY (3P)	
CN6			E40-9490-15	PIN ASSY (20P)	
CN7			E40-3261-05	PIN ASSY (3P)	
CN8		*	E41-0194-05	FLAT CABLE CONNECTOR (24P)	
J1			E58-0863-15	RECTANGULAR RECEPTACLE (16P)	
W9		* 2B	E30-6098-05	CORD WITH PLUG	
L1			L33-1170-05	CHOKE COIL ASSY (140UH)	
L2			L33-1153-05	SMALL FIXED INDUCTOR (10UH)	
L3			L40-2201-78	SMALL FIXED INDUCTOR (22UH)	K1,M1
L5			L40-4792-78	SMALL FIXED INDUCTOR (4.7UH)	
L7			L33-1039-05	LINE FILTER COIL (52mH)	
L9-13			L40-4795-68	SMALL FIXED INDUCTOR (4.7UH)	
L351			L92-0075-05	CHIP FERRITE	
L352			L40-4792-78	SMALL FIXED INDUCTOR (4.7UH)	
L471		*	L33-1853-05	CHOKE COIL (100UH)	
X1			L78-0821-05	RESONATOR (20.0MHZ)	
X4			L77-2738-05	CRYSTAL RESONATOR (32.768KHZ)	
F		2B	N30-3006-45	PAN HEAD MACHINE SCREW	
G		3B	N30-3010-46	PAN HEAD MACHINE SCREW	

K1 : KDC-X659    K3 : KDC-MP819    M1 : KDC-Z838

⚠ indicates safety critical components.

## PARTS LIST

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Teile ohne Parts No. werden nicht geliefert.

### ELECTRIC UNIT (X25-9240-XX)

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
K	2B		N83-3005-46	PAN HEAD TAPTITE SCREW	
N	2B		N80-3008-46	PAN HEAD TAPTITE SCREW	
CP2			R90-1016-05	MULTI-COMP 470 X4	
CP3,4			R90-1022-05	MULTI-COMP 470 X2	
CP5			R90-0725-05	MULTI-COMP 1K X2	
CP6			R90-1013-05	MULTI-COMP 2.2K X2	
CP7		*	R90-1048-05	MULTI-COMP 4.7K X2	
CP8		*	R90-1508-05	MULTI-COMP 100 X2	
CP9		*	R90-1048-05	MULTI-COMP 4.7K X2	
CP10		*	R90-1045-05	MULTI-COMP 470 X2	
CP11-13		*	R90-1051-05	MULTI-COMP 100K X2	
CP16		*	R90-1058-05	MULTI-COMP 100K X4	
CP17			R90-1046-05	MULTI-COMP 1K X2	
R1			RK73GB2A104J	CHIP R 100K J 1/10W	
R2			RK73FB2B152J	CHIP R 1.5K J 1/8W	
R3			RK73GB2A223J	CHIP R 22K J 1/10W	
R4			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R5			RK73EB2E221J	CHIP R 220 J 1/4W	
R6			RK73GB2A153J	CHIP R 15K J 1/10W	
R7			RK73GH1J432D	CHIP R 4.3K D 1/16W	
R8			RK73GH1J243D	CHIP R 24K D 1/16W	
R10			RK73GB2A562J	CHIP R 5.6K J 1/10W	
R11			RK73GB2A104J	CHIP R 100K J 1/10W	
R12			RK73FB2B103J	CHIP R 10K J 1/8W	
R13			RK73EB2E102J	CHIP R 1.0K J 1/4W	K1,M1
R14			RK73FB2B561J	CHIP R 560 J 1/8W	K1,M1
R16			RK73GB2A104J	CHIP R 100K J 1/10W	
R19			RK73EB2E103J	CHIP R 10K J 1/4W	
R20			RK73GB2A104J	CHIP R 100K J 1/10W	
R21			RK73FB2B102J	CHIP R 1.0K J 1/8W	K1,M1
R23		*	RK73GB2A750J	CHIP R 75 J 1/10W	K1,M1
R24			RK73GB2A272J	CHIP R 2.7K J 1/10W	K1,M1
R25			RK73GB2A470J	CHIP R 47 J 1/10W	K1,M1
R26		*	RK73GB2A752J	CHIP R 7.5K J 1/10W	K1,M1
R27			RK73GB2A563J	CHIP R 56K J 1/10W	K1,M1
R28			RK73GB2A913J	CHIP R 91K J 1/10W	K1,M1
R29			RK73GB2A470J	CHIP R 47 J 1/10W	K1,M1
R30			RK73GB2A103J	CHIP R 10K J 1/10W	K1,M1
R31,32			RK73GB2A913J	CHIP R 91K J 1/10W	K1,M1
R33			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R35			RK73GB2A471J	CHIP R 470 J 1/10W	
R36			RK73GB2A104J	CHIP R 100K J 1/10W	
R37			RK73FB2B472J	CHIP R 4.7K J 1/8W	
R38			R92-0365-05	CHIP R 1.0K J 1/2W	
R39			RK73GB2A223J	CHIP R 22K J 1/10W	
R40			R92-0365-05	CHIP R 1.0K J 1/2W	
R41			RK73GB2A123J	CHIP R 12K J 1/10W	
R42			RK73GB2A223J	CHIP R 22K J 1/10W	
R43			RK73GB2A153J	CHIP R 15K J 1/10W	
R44			RK73GB2A223J	CHIP R 22K J 1/10W	
R45			RD14DB2H332J	SMALL-RD 3.3K J 1/2W	
R46			RK73EB2E473J	CHIP R 47K J 1/4W	
R47			RK73GB2A183J	CHIP R 18K J 1/10W	
R48			RK73GB2A104J	CHIP R 100K J 1/10W	

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
R50			RK73GB2A104J	CHIP R 100K J 1/10W	
R52-54			RK73GB2A473J	CHIP R 47K J 1/10W	
R55,56			RK73EB2E100J	CHIP R 10 J 1/4W	
R57			RK73EB2E4R7J	CHIP R 4.7 J 1/4W	
R58			RK73GB2A104J	CHIP R 100K J 1/10W	
R98			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R103			RK73FB2B472J	CHIP R 4.7K J 1/8W	
R111			RK73FB2B223J	CHIP R 22K J 1/8W	
R112			R92-0366-05	CHIP R 560 J 1W	
R115			RK73GB2A333J	CHIP R 33K J 1/10W	
R127			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R130,131			RK73EB2E472J	CHIP R 4.7K J 1/4W	
R132-134			RK73EB2E101J	CHIP R 100 J 1/4W	
R135-137			RK73EB2E472J	CHIP R 4.7K J 1/4W	
R140			RK73GB2A473J	CHIP R 47K J 1/10W	
R141			RK73GB2A153J	CHIP R 15K J 1/10W	
R142			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R143			RK73GB2A473J	CHIP R 47K J 1/10W	
R144			RK73GB2A333J	CHIP R 33K J 1/10W	
R145			RK73GB2A473J	CHIP R 47K J 1/10W	
R146		*	RK73GB2A821J	CHIP R 820 J 1/10W	
R147			RK73FB2B102J	CHIP R 1.0K J 1/8W	
R148			RK73FB2B912J	CHIP R 9.1K J 1/8W	
R149			RK73FB2B243J	CHIP R 24K J 1/8W	
R150			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R151			RK73GB2A103J	CHIP R 10K J 1/10W	
R152			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R153,154			RK73GB2A334J	CHIP R 330K J 1/10W	
R155,156			RK73EB2E100J	CHIP R 10 J 1/4W	
R157			RK73EB2E4R7J	CHIP R 4.7 J 1/4W	
R161,162			RK73FB2B471J	CHIP R 470 J 1/8W	
R163,164			RK73FB2B222J	CHIP R 2.2K J 1/8W	K1,M1
R163,164			RK73FB2B223J	CHIP R 22K J 1/8W	K3
R165,166			RK73FB2B103J	CHIP R 10K J 1/8W	K1,M1
R167,168			RK73FB2B223J	CHIP R 22K J 1/8W	K1,M1
R169,170		*	RK73FB2B820J	CHIP R 82 J 1/8W	
R171,172			RK73FB2B471J	CHIP R 470 J 1/8W	
R173,174			RK73FB2B222J	CHIP R 2.2K J 1/8W	K1,M1
R173,174			RK73FB2B223J	CHIP R 22K J 1/8W	K3
R175,176			RK73FB2B103J	CHIP R 10K J 1/8W	K1,M1
R177,178			RK73FB2B223J	CHIP R 22K J 1/8W	K1,M1
R179,180		*	RK73FB2B820J	CHIP R 82 J 1/8W	
R181,182			RK73FB2B471J	CHIP R 470 J 1/8W	K1,M1
R183,184			RK73FB2B222J	CHIP R 2.2K J 1/8W	K1,M1
R185,186			RK73FB2B103J	CHIP R 10K J 1/8W	K1,M1
R187,188			RK73FB2B223J	CHIP R 22K J 1/8W	K1,M1
R189,190		*	RK73FB2B820J	CHIP R 82 J 1/8W	K1,M1
R200			RK73GB2A221J	CHIP R 220 J 1/10W	
R201			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R202			RK73GB2A103J	CHIP R 10K J 1/10W	
R203			RK73GB2A432J	CHIP R 4.3K J 1/10W	
R204			RK73GB2A100J	CHIP R 10 J 1/10W	
R210			RK73FB2B102J	CHIP R 1.0K J 1/8W	
R211			RK73GB2A223J	CHIP R 22K J 1/10W	
R212			RK73FB2B102J	CHIP R 1.0K J 1/8W	

**K1** : KDC-X659    **K3** : KDC-MP819    **M1** : KDC-Z838

▲ indicates safety critical components.

## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

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

Teile ohne Parts No. werden nicht geliefert.

### ELECTRIC UNIT (X25-9240-XX)

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
R213			RK73GB2A223J	CHIP R 22K J 1/10W	
R230			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R231			RK73GB2A223J	CHIP R 22K J 1/10W	
R301			RK73GB2A104J	CHIP R 100K J 1/10W	
R303		*	RK73GB2A241J	CHIP R 240 J 1/10W	
R305			RK73GB2A394J	CHIP R 390K J 1/10W	
R306			RK73GB2A101J	CHIP R 100 J 1/10W	
R353			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R355			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R357			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R358			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R359			RK73GB2A104J	CHIP R 100K J 1/10W	
R360			RK73GB2A471J	CHIP R 470 J 1/10W	
R361,362			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R364			RK73GB2A104J	CHIP R 100K J 1/10W	
R366			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R367			RK73GB2A473J	CHIP R 47K J 1/10W	
R370			RK73GB2A104J	CHIP R 100K J 1/10W	
R375			RK73GB2A105J	CHIP R 1.0M J 1/10W	
R382			RK73GB2A104J	CHIP R 100K J 1/10W	
R389			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R390			RK73GB2A473J	CHIP R 47K J 1/10W	
R392			RK73GB2A473J	CHIP R 47K J 1/10W	
R393			RK73GB2A104J	CHIP R 100K J 1/10W	
R397			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R400			RK73GB2A101J	CHIP R 100 J 1/10W	
R401			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R402			RK73GB2A471J	CHIP R 470 J 1/10W	
R403			RK73GB2A104J	CHIP R 100K J 1/10W	K1,M1
R404			RK73GB2A104J	CHIP R 100K J 1/10W	K3
R405			RK73GB2A104J	CHIP R 100K J 1/10W	K3,M1
R406			RK73GB2A104J	CHIP R 100K J 1/10W	K1
R407			RK73GB2A104J	CHIP R 100K J 1/10W	K3,M1
R408			RK73GB2A104J	CHIP R 100K J 1/10W	K1
R409			RK73GB2A104J	CHIP R 100K J 1/10W	K1,K3
R410			RK73GB2A104J	CHIP R 100K J 1/10W	M1
R412			RK73GB2A104J	CHIP R 100K J 1/10W	
R414			RK73GB2A104J	CHIP R 100K J 1/10W	
R417			RK73GB2A223J	CHIP R 22K J 1/10W	
R421			RK73GB2A473J	CHIP R 47K J 1/10W	
R422			RK73GB2A223J	CHIP R 22K J 1/10W	
R475			RK73FB2B223J	CHIP R 22K J 1/8W	
R477			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R815			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R902			RK73GB2A104J	CHIP R 100K J 1/10W	
R903			RK73GB2A471J	CHIP R 470 J 1/10W	
R905			RK73GB2A471J	CHIP R 470 J 1/10W	
W1-6			R92-1252-05	CHIP R 0 OHM J 1/16W	K3
W11,12			R92-1252-05	CHIP R 0 OHM J 1/16W	K1,M1
W14			R92-1252-05	CHIP R 0 OHM J 1/16W	
W15-18			R92-1252-05	CHIP R 0 OHM J 1/16W	K3
W19			R92-1252-05	CHIP R 0 OHM J 1/16W	
W112,113			R92-1252-05	CHIP R 0 OHM J 1/16W	
W120,121			R92-1252-05	CHIP R 0 OHM J 1/16W	
W902			R92-1252-05	CHIP R 0 OHM J 1/16W	

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
S1			S74-0809-05	MICRO SWITCH	
D1			RM10ZLF	DIODE	
D3		*	MA8082-L	ZENER DIODE	
D5		*	MA8100-L	ZENER DIODE	
D6			MA4051(N)-M	ZENER DIODE	
D7			MA8056-M	ZENER DIODE	K1,M1
D9			MA4110(N)-M	ZENER DIODE	K1,M1
D10			MA4056(N)-M	ZENER DIODE	K1,M1
D13,14			S1J	DIODE	
D13,14			1SR154-400	DIODE	
D15			1SS133	DIODE	
D16			MA4068(N)-M	ZENER DIODE	
D17			MA4062(N)-M	ZENER DIODE	
D19,20			DAP202U	DIODE	
D19,20			MA142WA	DIODE	
D21			DA204U	DIODE	
D22-24			MA4062-L	ZENER DIODE	
D25,26			RD6.8M(B2)	ZENER DIODE	
D27,28			MA8068-M	ZENER DIODE	
D29			MA8062-L	ZENER DIODE	
D30			DAP202U	DIODE	
D30			MA142WA	DIODE	
D31			MA4062-L	ZENER DIODE	
D32			DAN202U	DIODE	
D32			MA142WK	DIODE	
D33-36			S1J	DIODE	
D33-36			1SR154-400	DIODE	
D38-41			1SR154-400	DIODE	
D39,40			S1J	DIODE	
D42			DA204U	DIODE	
D43			IMSA-6801	SURGE ABSORBER	
D44			MA8068-M	ZENER DIODE	
D45			MA8062-L	ZENER DIODE	
D46			MA8068-M	ZENER DIODE	
D50			MA4056(N)-M	ZENER DIODE	
D51-53			FTZ6.8E	ZENER DIODE	
D54			DA204U	DIODE	
D111,112			S1J	DIODE	
D111,112			1SR154-400	DIODE	
D472			SS14	DIODE	
D473			MA8056-M	ZENER DIODE	
D475			SS14	DIODE	
IC1		*	UPD703033GFA17	MI-COM IC	
IC2			TDA7407	ANALOGUE IC	
IC3			M5237ML	IC (VOLTAGE REGULATOR)	
IC4			TDA7560	ANALOGUE IC	
IC5			TDA7401	ANALOGUE IC	K1,M1
IC6			ICL7660SIBA	ANALOGUE IC	K1,M1
IC7			TC74HC02AF	MOS-IC	
IC8			NJM4565M-TE2	ANALOGUE IC	
IC10-12			NJM4565M-TE2	ANALOGUE IC	K1,M1
IC16			S-80837ANNP	MOS-IC	
IC20			BA3121F	IC (ISO AMP)	
IC21			BA3129F	IC (SWITCH)	

**K1** : KDC-X659    **K3** : KDC-MP819    **M1** : KDC-Z838

⚠ indicates safety critical components.

## PARTS LIST

\* New Parts

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

Teile ohne Parts No. werden nicht geliefert.

### ELECTRIC UNIT (X25-9240-XX)

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
IC23			SI-8050JD	ANALOGUE IC	
IC25			BR24C02F-W	MEMORY IC	
Q1			2SD2375	TRANSISTOR	
Q3			2SA1037K	TRANSISTOR	
Q4			2SA2057	TRANSISTOR	
Q5			DTC144EUA	DIGITAL TRANSISTOR	
Q5			UN5213	DIGITAL TRANSISTOR	
Q6,7			DTA124EUA	DIGITAL TRANSISTOR	
Q6,7			UN5112	DIGITAL TRANSISTOR	
Q8			DTC124EUA	DIGITAL TRANSISTOR	
Q8			UN5212	DIGITAL TRANSISTOR	
Q9			2SB1427	TRANSISTOR	
Q10			2SA2057	TRANSISTOR	
Q11			2SC4081	TRANSISTOR	
Q12			DTC124EUA	DIGITAL TRANSISTOR	
Q12			UN5212	DIGITAL TRANSISTOR	
Q13			DTA124EUA	DIGITAL TRANSISTOR	
Q13			UN5112	DIGITAL TRANSISTOR	
Q14			DTA123JK	DIGITAL TRANSISTOR	K1,M1
Q14			KRA105S	DIGITAL TRANSISTOR	K1,M1
Q15			DTC144EUA	DIGITAL TRANSISTOR	
Q15			UN5213	DIGITAL TRANSISTOR	
Q16			2SB1443	TRANSISTOR	K1,M1
Q17			2SC4081	TRANSISTOR	K1,M1
Q18			2SA1576A	TRANSISTOR	K1,M1
Q19			2SC4081	TRANSISTOR	K1,M1
Q20			2SA1576A	TRANSISTOR	K1,M1
Q21,22			2SC4081	TRANSISTOR	K1,M1
Q23			2SA1576A	TRANSISTOR	K1,M1
Q26			2SB1277(Q,R)	TRANSISTOR	
Q27			2SA1576A	TRANSISTOR	
Q28			DTA124EUA	DIGITAL TRANSISTOR	
Q28			UN5112	DIGITAL TRANSISTOR	
Q29			DTC114YUA	DIGITAL TRANSISTOR	
Q29			UN5214	DIGITAL TRANSISTOR	
Q30,31			2SC4081	TRANSISTOR	
Q32,33			DTA124EUA	DIGITAL TRANSISTOR	
Q32,33			UN5112	DIGITAL TRANSISTOR	
Q34			2SC4081	TRANSISTOR	
Q35			DTC124EUA	DIGITAL TRANSISTOR	
Q35			UN5212	DIGITAL TRANSISTOR	
Q36-40			DTC143TUA	DIGITAL TRANSISTOR	K3
Q36-40			UN5216	DIGITAL TRANSISTOR	K3
Q36-42			DTC143TUA	DIGITAL TRANSISTOR	K1,M1
Q36-42			UN5216	DIGITAL TRANSISTOR	K1,M1
Q43			DTC124EUA	DIGITAL TRANSISTOR	
Q43			UN5212	DIGITAL TRANSISTOR	
Q44			CPH3105	TRANSISTOR	
Q45			DTC124EUA	DIGITAL TRANSISTOR	
Q45			UN5212	DIGITAL TRANSISTOR	
Q46			CPH3105	TRANSISTOR	
Q101			DTA114YUA	DIGITAL TRANSISTOR	
Q101			UN5114	DIGITAL TRANSISTOR	
Q103			DTC124EUA	DIGITAL TRANSISTOR	
Q103			UN5212	DIGITAL TRANSISTOR	

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
Q111			2SB1277(Q,R)	TRANSISTOR	
Q112			DTC114YUA	DIGITAL TRANSISTOR	
Q112			UN5214	DIGITAL TRANSISTOR	
Q305			DTA114YUA	DIGITAL TRANSISTOR	K1,K3
Q305			UN5114	DIGITAL TRANSISTOR	K1,K3
Q305,306			DTA114YUA	DIGITAL TRANSISTOR	M1
Q305,306			UN5114	DIGITAL TRANSISTOR	M1
Q472			DTC144EUA	DIGITAL TRANSISTOR	
Q472			UN5213	DIGITAL TRANSISTOR	
Q473			2SC4081	TRANSISTOR	
Q474			2SB1548(P)	TRANSISTOR	
TH1			PTH9C42BD471Q	POSITIVE RESISTOR	
A1	2A	*	W02-3341-05	ELECTRIC CIRCUIT MODULE	
FE1		*	X86-3530-11	TUNER UNIT	

### DAUGHTER UNIT (X89-253X-XX)

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
CN1			E40-9488-05	SOCKET FOR PIN ASSY (20P)	
J1			E58-0865-05	RECTANGULAR RECEPTACLE (16P)	
R1			RK73EB2E471J	CHIP R 470 J 1/4W	
R2			RK73EB2E241J	CHIP R 240 J 1/4W	
R3			RK73EB2E471J	CHIP R 470 J 1/4W	
R4-6			RK73EB2E241J	CHIP R 240 J 1/4W	
R7			RK73EB2E471J	CHIP R 470 J 1/4W	
R8			RK73EB2E511J	CHIP R 510 J 1/4W	
R9			RK73EB2E471J	CHIP R 470 J 1/4W	
R10			RK73EB2E221J	CHIP R 220 J 1/4W	M1
R11			RK73EB2E221J	CHIP R 220 J 1/4W	
S1			S70-0856-05	TACT SWITCH	M1
S1			S70-0873-05	TACT SWITCH	K1,K3

K1 : KDC-X659    K3 : KDC-MP819    M1 : KDC-Z838

⚠ indicates safety critical components.





## SPECIFICATIONS

### ● KDC-MP819

#### FM Section

Frequency Range .....	87.9MHz-107.9MHz
(Frequency Step) .....	(200kHz)
Channel Space Selection .....	50k/200kHz
Usable Sensitivity (S/N:30dB) .....	9.3dBf (0.8μV/75Ω)
Quieting Sensitivity (S/N:50dB) .....	15.2dBf (1.6μV/75Ω)
Frequency Response (±3.0dB) .....	30Hz-15kHz
S/N .....	70dB (MONO)
Selectivity .....	≥ 80dB (±400kHz)
Stereo Separation .....	40dB (1kHz)

#### AM Section

Frequency Range .....	530kHz-1700kHz
(Frequency Step) .....	(10kHz)
Channel Space Selection .....	9k/10kHz
Usable Sensitivity (S/N:20dB) .....	28dBμ (25μV)

#### CD Section

Laser Diode .....	GaAlAs (λ=780nm)
Digital Filter (D/A) .....	8 Times Over Sampling
D/A Converter .....	1 Bit
Spindle Speed .....	1000-400rpm (CLV • 2times)
Wow & Flutter .....	Below Measurable Limit
Frequency Response .....	10Hz-20kHz (±1dB)
Total Harmonic Distortion .....	0.01% (1kHz)
S/N Ratio .....	96dB (1kHz)
Dynamic Range .....	95dB
Channel Separation .....	90dB
MP3 Decode .....	Compliant with MPEG-1.0/2.0/2.5 AudioLayer-3

#### AMPLIFIER Section

Preout Level/Load -Unbalansed .....	1800mV/10kΩ (CD/CD-CH)
Preout Impedance .....	≤ 600Ω
Maximum Power .....	50W×4
Full Bandwidth Power .....	22W×4 (at less then 1%THD)

#### AUX Input

Frequency Response .....	20Hz-20kHz (±1dB)
Maximum Input Level .....	1.2V
Input Impedance .....	≥ 44kΩ

#### TONE Section

Bass .....	100Hz±10dB
Middle .....	1kHz±10dB
Treble .....	10kHz±10dB

#### General

Operating Voltage .....	14.4V (11V-16V allowable)
Current Consumption .....	10A
Installation Size (W) .....	180mm (7-1/16 in.)
(H) .....	50mm (1-15/16 in.)
(D) .....	159mm (6-1/4 in.)
Weight .....	1.4kg (3.08lbs.)

### ● KDC-X659

#### FM Section

Frequency Range .....	87.9MHz-107.9MHz
(Frequency Step) .....	(200kHz)
Channel Space Selection .....	50k/200kHz
Usable Sensitivity (S/N:30dB) .....	9.3dBf (0.8μV/75Ω)
Quieting Sensitivity (S/N:50dB) .....	15.2dBf (1.6μV/75Ω)
Frequency Response (±3.0dB) .....	30Hz-15kHz
S/N .....	70dB (MONO)
Selectivity .....	≥ 80dB (±400kHz)
Stereo Separation .....	40dB (1kHz)

#### AM Section

Frequency Range .....	530kHz-1700kHz
(Frequency Step) .....	(10kHz)
Channel Space Selection .....	9k/10kHz
Usable Sensitivity (S/N:20dB) .....	28dBμ (25μV)

#### CD Section

Laser Diode .....	GaAlAs (λ=780nm)
Digital Filter (D/A) .....	8 Times Over Sampling
D/A Converter .....	1 Bit
Spindle Speed .....	1000-400rpm (CLV • 2times)
Wow & Flutter .....	Below Measurable Limit
Frequency Response .....	10Hz-20kHz (±1dB)
Total Harmonic Distortion .....	0.01% (1kHz)
S/N Ratio .....	96dB (1kHz)
Dynamic Range .....	95dB
Channel Separation .....	90dB
MP3 Decode .....	Compliant with MPEG-1.0/2.0/2.5 AudioLayer-3

#### AMPLIFIER Section

Preout Level/Load -Unbalansed .....	4500mV/10kΩ (CD/CD-CH)
Preout Impedance .....	≤ 80Ω
Maximum Power .....	50W×4
Full Bandwidth Power .....	22W×4 (at less then 1%THD)

#### AUX Input

Frequency Response .....	20Hz-20kHz (±1dB)
Maximum Input Level .....	1.2V
Input Impedance .....	≥ 44kΩ

#### TONE Section

Bass .....	100Hz±10dB
Middle .....	1kHz±10dB
Treble .....	10kHz±10dB

#### General

Operating Voltage .....	14.4V (11V-16V allowable)
Current Consumption .....	10A
Installation Size (W) .....	180mm (7-1/16 in.)
(H) .....	50mm (1-15/16 in.)
(D) .....	159mm (6-1/4 in.)
Weight .....	1.4kg (3.08lbs.)

# KDC-MP819/X659/Z838

## SPECIFICATIONS

### ● KDC-Z838

#### FM Section

Frequency Range .....	87.5MHz-108.0MHz
(Frequency Step) .....	(50kHz)
Frequency Range .....	87.9MHz-107.9MHz
(Frequency Step) .....	(200kHz)
Channel Space Selection .....	50k/200kHz
Usable Sensitivity (S/N:30dB) .....	9.3dBf (0.8 $\mu$ V/75 $\Omega$ )
Quieting Sensitivity (S/N:50dB) .....	15.2dBf (1.6 $\mu$ V/75 $\Omega$ )
Frequency Response ( $\pm$ 3.0dB) .....	30Hz-15kHz
S/N .....	70dB (MONO)
Selectivity .....	$\geq$ 80dB ( $\pm$ 400kHz)
Stereo Separation .....	40dB (1kHz)

#### AM Section

Frequency Range .....	531kHz-1611kHz
(Frequency Step) .....	(9kHz)
Frequency Range .....	530kHz-1700kHz
(Frequency Step) .....	(10kHz)
Channel Space Selection .....	9k/10kHz
Usable Sensitivity (S/N:20dB) .....	28dB $\mu$ (25 $\mu$ V)

#### CD Section

Laser Diode .....	GaAlAs ( $\lambda$ =780nm)
Digital Filter (D/A) .....	8 Times Over Sampling
D/A Converter .....	1 Bit
Spindle Speed .....	1000-400rpm (CLV • 2times)
Wow & Flutter .....	Below Measurable Limit
Frequency Response .....	10Hz-20kHz ( $\pm$ 1dB)
Total Harmonic Distortion .....	0.01% (1kHz)
S/N Ratio .....	96dB (1kHz)
Dynamic Range .....	95dB
Channel Separation .....	90dB
MP3 Decode .....	Compliant with MPEG-1.0/2.0/2.5 AudioLayer-3

#### AMPLIFIER Section

Preout Level/Load -Unbalansed .....	4500mV/10k $\Omega$ (CD/CD-CH)
Preout Impedance .....	$\leq$ 80 $\Omega$
Maximum Power .....	50W $\times$ 4
Full Bandwidth Power .....	22W $\times$ 4 (at less then 1%THD)

#### AUX Input

Frequency Response .....	20Hz-20kHz ( $\pm$ 1dB)
Maximum Input Level .....	1.2V
Input Impedance .....	$\geq$ 44k $\Omega$

#### TONE Section

Bass .....	100Hz $\pm$ 10dB
Middle .....	1kHz $\pm$ 10dB
Treble .....	10kHz $\pm$ 10dB

#### General

Operating Voltage .....	14.4V (11V-16V allowable)
Current Consumption .....	10A
Installation Size (W) .....	180mm
(H) .....	50mm
(D) .....	159mm
Weight .....	1.4kg

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

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