

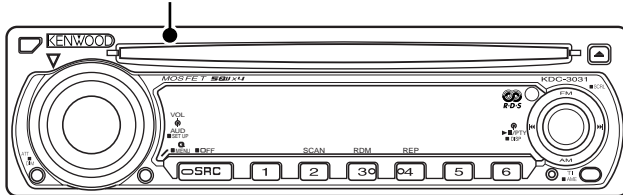
CD RECEIVER

KDC-3031A/AY/G/GY KDC-309A/G KDC-F331A/G SERVICE MANUAL

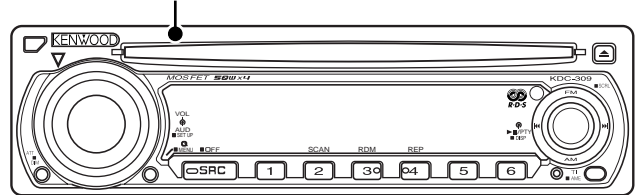
KENWOOD

© 2004-12 PRINTED IN JAPAN
B53-0232-00 (N) 1813

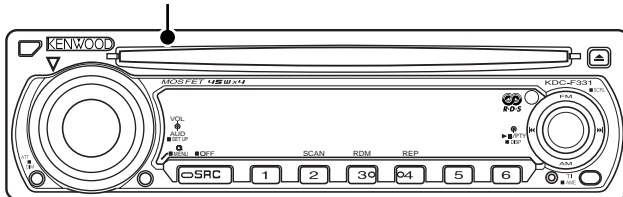
PANEL ASSY
KDC-3031A/AY/G/GY (A64-3458-12)



PANEL ASSY
KDC-309A/G (A64-3459-12)



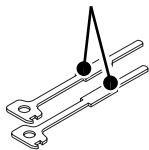
PANEL ASSY
KDC-F331A/G (A64-3460-02)



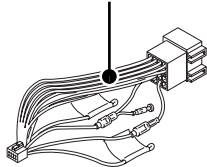
SPARE TDF PANEL

MAIN UNIT NAME	TDF PARTS No.	TDF NAME
KDC-3031A/AY/G/GY	Y33-2140-62	TDF-3031
KDC-309A/G	Y33-2140-64	TDF-309
KDC-F331A/G	Y33-2140-63	TDF-WF431

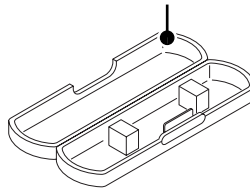
LEVER
(D10-4589-04) x2



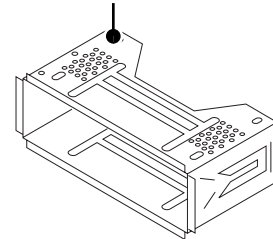
DC CORD
(E30-6413-05)



PLASTIC CABINET ASSY
(A02-2736-03)



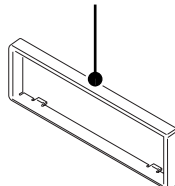
MOUNTING HARDWARE ASSY
(J21-9716-03)



ANTENNA ADAPTOR
(T90-0523-05)

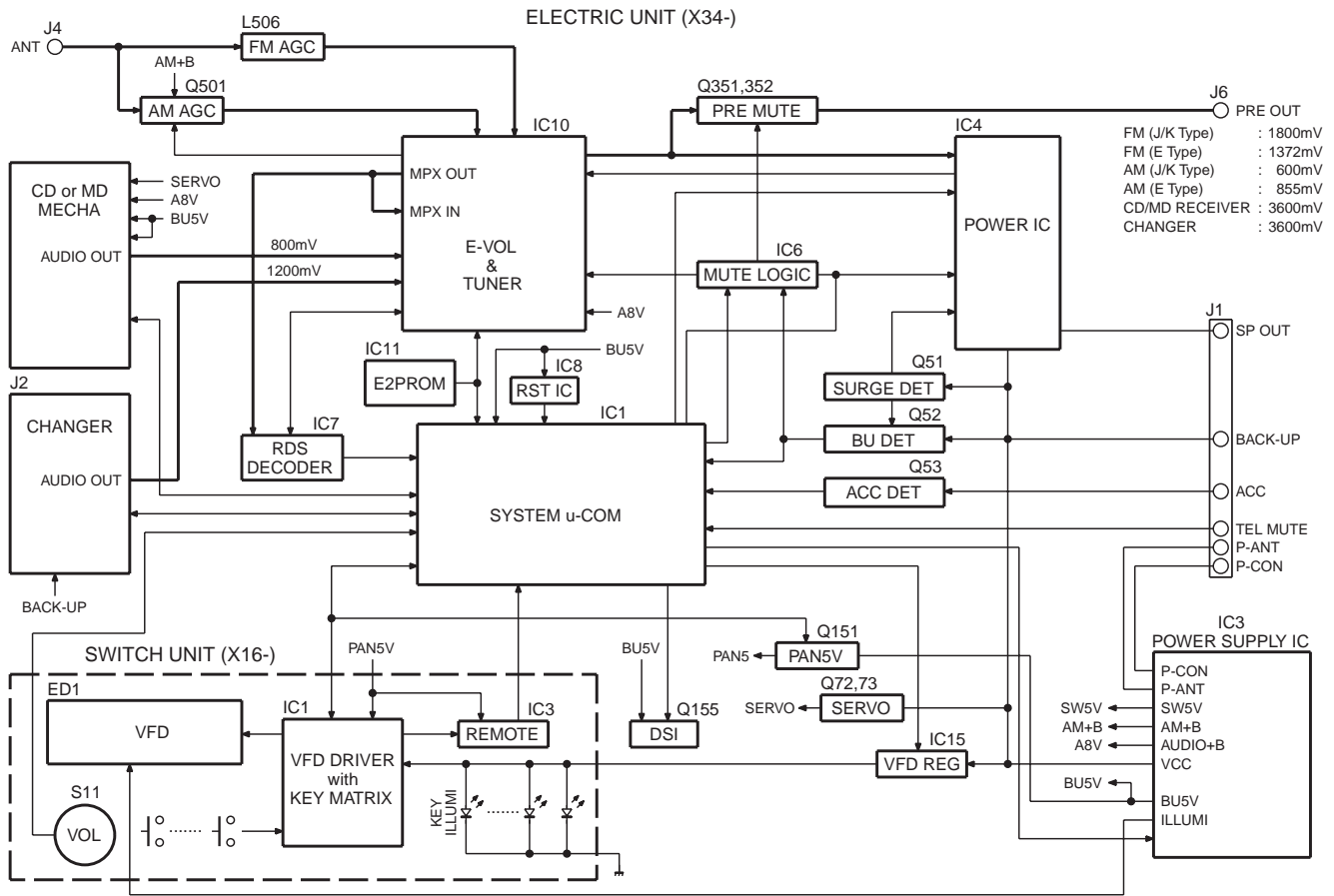


* ESCUTCHEON
(B07-xxxx-xx)



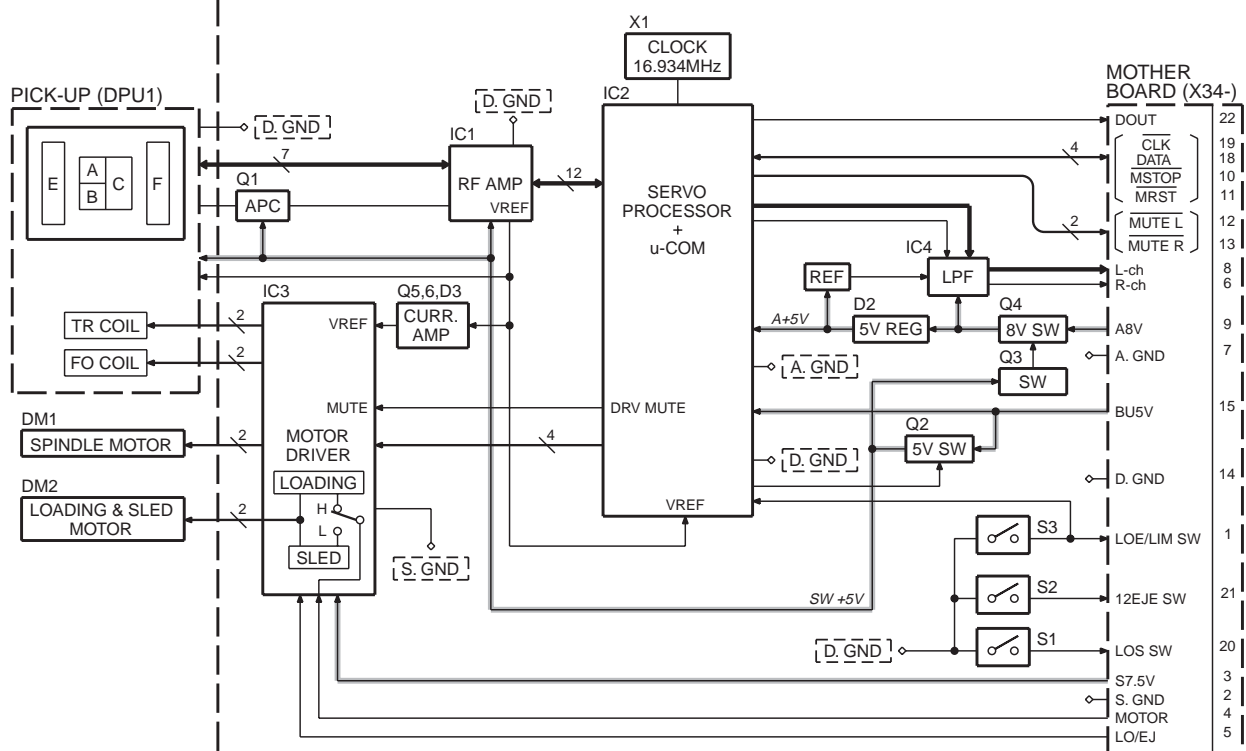
* Depends on the model. Refer to the parts list.

BLOCK DIAGRAM



MECHA ASSY (X92-)

CD PLAYER UNIT (X32-5750-00)



COMPONENTS DESCRIPTION

● ELECTRIC UNIT (X34-3412-7x)

Ref. No.	Application / Function	Operation / Condition
IC1	SYSTEM μ -COM	System control.
IC3	POWER SUPPLY	DC5Vx2, 7.9Vx1, 8.1Vx1, 10.3V, P.CON, P-ANT output.
IC4	POWER IC	Audio signal amplifier.
IC6	MUTE LOGIC	Mute control.
IC7	RDS DECODER	RDS decode.
IC8	RESET	"L" when detection voltage goes below 3.6V.
IC10	E-VOL & TUNER	E-VOL, Tuner, Stereo decode.
IC11	E2PROM	Saves and writes tuner adjustment data.
IC15	VFD REGULATOR	11.3V output voltage for LED and VFD.
Q51	SERGE DET	"ON" when the base goes "H".
Q52	BU DET	"ON" when the base goes "H".
Q53	ACC DET	"ON" when the base goes "H".
Q71	SERVO+B CONTROL SW	"ON" when the base goes "H".
Q72,73	SERVO+B AVR	Output voltage level : 7.5V.
Q74	IC3 CONTROL SW	"ON" when the base goes "H" (Output voltage : 10.3V).
Q151	PANEL 5V SW	"ON" when the base goes "L".
Q155	DSI ILLUMI SW	"ON" when the base goes "L".
Q252	IC4 STBY SW	"ON" when the base goes "L".
Q330	Q351, 352 MUTE DRIVER	"ON" when the base goes "L".
Q351	Lch PRE MUTE SW	Pre-output is muted when the base goes "H".
Q352	Rch PRE MUTE SW	Pre-output is muted when the base goes "H".
Q501	AM RF AMP	Adjusts for AM-RF gain.

● CD PLAYER UNIT (X32-5750-00)

Ref. No.	Application / Function	Operation / Condition
IC1	RF AMPLIFIER responding to CD-RW	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, track crossing and off-tracking conditions, included gain control function during CD-RW.
IC2	CD SIGNAL PROCESSOR built-in μ -COM	Focusing, tracking, sled and spindle servo processing. Automatic adjustment (focusing, tracking, gain, offset and balance) operations. Digital signal processing (DSP, PLL, sub-codes, CIRC error correction, audio data interpolation processing) operations, and microcomputer function.
IC3	4ch BTL DRIVER	Focusing coil, tracking coil, spindle motor and sled motor driver, disc loading and eject operation.
IC4	L.P.F. (LOW PASS FILTER)	2nd low pass filter for audio signals.
Q1	APC (AUTOMATIC POWER CONTROL)	LD power control.
Q2	DIGITAL +5V SW	"ON" When P. ON signal goes "L".
Q3	Q4 SW	"ON" When P. ON signal goes "L" (SW+5V is ON).
Q4	ANALOG +8V SW	"ON" When P. ON signal goes "L" (Q3 is ON).
Q5, 6	CURRENT AMP	Current driver.

COMPONENTS DESCRIPTION

● SWITCH UNIT (X16-2932-7x)

Ref. No.	Application / Function	Operation / Condition
IC1	VFD DRIVER	
IC3	REMOTE SENSOR	
Q1	GREEN LED SW	"ON" when the base goes "H".
Q2	RED LED SW	"ON" when the base goes "H".
Q21	PAN SW5V	"ON" when the base goes "H".

MICROCOMPUTER'S TERMINAL DESCRIPTION

● SYSTEM μ -COM : IC1 on X34- (ELECTRIC UNIT)

Pin No.	Active (H/L)	Pin Name	I/O	Application	Processing Operation
1		DC ERR	I	DC offset detection input	
2		LINE MUTE	I	Phone detection	NAVI MUTE : Over 2.5V, TEL MUTE : Below 1V
3		ROTARY CW	I	Rotary encoder input	
4		AVSS	-		
5		TUN TYPE1	I	E-VOL setting switch	Refer to "TUN TYPE" on the TRUTH TABLE
6		TUN TYPE2	I	E-VOL setting switch	Refer to "TUN TYPE" on the TRUTH TABLE
7		AVREF1	-		
8		VFD DATAF	I	Data input from VFD driver	
9		VFD DATAS	O	Data output to VFD driver	
10		VFD CLK	O	Clock output to VFD driver	
11	L	VFD RST	O	Reset output to VFD driver	Display OFF, Key reset, TDF panel OFF : L Display ON, Key scan : H
12		VFD CE	O	Chip enable output to VFD driver	
13		ROTARY CCW	I	Rotary encoder input	
14	L	TDF DET	I	TDF panel detection	TDF panel OFF : H, TDF panel ON : L
15		PWIC BEEP	O	Beep output	
16~18		NC	-		
19		RDS AFSL	O	Tuner RDS mute output	Refer to "RDS AFSL" on the TRUTH TABLE
20	L	TUN ADJ	I	For adjusting IC10	Adjustment=H, PS1-1,2=L, PS1-3=Hi-Z, PS2-1,2=Hi-Z, TUN DATA, CLK=Hi-Z
21		TUN SD	I	Tuner search stop output	H : Station exists, L : Station does not exist
22~24		NC	-		
25		AUD SDA	I/O	Volume + tuner I2C data input and output	
26		AUD SCL	I/O	Volume + tuner I2C clock input and output	
27	H	PWIC STBY	O	Power IC standby output	Power IC ON : H, Power IC OFF : L
28	H	VOL MUTE	O	E-VOL mute output	L : Mute OFF, Hi-Z : Mute ON
29	L	PWIC MUTE	O	Power IC mute output	Power OFF : L, Standby : L, Tel mute : L
30		TUN FANC OUT	O	Tuner block (inside the μ -com) check	OK : L, NG : H

MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Active (H/L)	Pin Name	I/O	Application	Processing Operation
31		RESET2	O	Mute for reset	Output L
32		RDS DATA	I	RDS decoder data input	
33		VSS1	-		
34		RDS QUAL	I	RDS decoder QUAL input	
35	L	ACC DET	I	ACC detection	ACC exists : L, ACC does not exist : H
36	L	BU DET	I	Momentary power-down detection	BU exists : L BU does not exist (Momentary power-down) : H
37		NC	-		
38		PS2-2	O	Power supply control output	Refer to "POWER IC CONTROL" on the TRUTH TABLE
39		PS2-1	O	Power supply control output	Refer to "POWER IC CONTROL" on the TRUTH TABLE
40		PS1-1	O	Power supply control output	Refer to "POWER IC CONTROL" on the TRUTH TABLE
41		PS1-2	O	Power supply control output	Refer to "POWER IC CONTROL" on the TRUTH TABLE
42		PS1-3	O	Power supply control output	Refer to "POWER IC CONTROL" on the TRUTH TABLE
43,44		NC	-		
45		CD MUTE	I	CD mute request	L : Mute request
46	L	CD MSTOP	O	CD mecha u-com stop	H : mecha μ -com operates, L : mecha μ -com is stopped
47		CD LOE LIM SW	I	CD detection (chucking switch)	H : Loading is finished, L : Disc does not exist
48		CD LOEJ	I/O	CD motor control	Refer to "CD MECHA CONTROL OPERATION" on the TRUTH TABLE
49		CD MOTOR	O	CD motor control	Refer to "CD MECHA CONTROL OPERATION" on the TRUTH TABLE
50		NC	-		
51	L	CD MRST	O	CD mecha μ -com reset	H : Normal condition, L : Reset
52		CD SCL	I/O	CD mecha I2C clock output	
53		CD DISC12 SW	I	12cm CD detection	
54		CD LOS SW	I	CD loading detection	
55		CD SDA	I/O	CD mecha I2C data input and output	
56		OEM DISP CE	I/O	External display chip enable	External display
57		OEM DISP CLK	I/O	External display clock	External display
58		OEM DISP DATA	I/O	External display chip data	External display
59		DSI	O	DSI control	DSI ON : H, DSI OFF : L, TDF DET=H (DSI blinks)
60	L	RESET	I		
61		NC	-		
62	L	PON FL	O	VFD power supply ON	VFD ON : H, VFD OFF : L TDF DET H (DSI blinks) : L, TDF DET L : H
63		KEY REQ	I	Communication request from VFD driver	L : Key input
64		RDS CLK	I	RDS decoder clock input	
65		REMOTE	I	Remote control input	
66		NC	-		
67		VSS0	-		
68		VDD1	-		
69		X2	-		

MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Active (H/L)	Pin Name	I/O	Application	Processing Operation
70		X1	-		
71		TEST	-		
72		XT2	-		
73		XT1	-		
74		VDD0	-		
75		AVDD	-		
76~78		TYPE 3~TYPE 1	I	Destination switch	
79		RDS NOISE	I	Tuner quality (Noise) input	
80		TUN SMETER	I	Tuner S-meter input	

● TRUTH TABLE

• TUN TYPE

	TYPE 1	TYPE 2
General models commercially-designated as pure KENWOOD brand (Initial value) Initial value setting	L	L

• RDS AFSL (AF search)

High	Normal condition communication (IC10 side : High) (Quality time constant long / Stereo Decoder PLL : Not hold)
Low	AF search (IC10 side : Middle) (Quality time constant short / Stereo Decoder PLL : Hold)

• POWER SUPPLY IC (IC3) CONTROL

SEL1 (Pin No. 11)

PS1-2	PS1-3	PS2-1	ILLUMI	P-CON	P-ANT
L	L	L	OFF	OFF	OFF
L	L	H	ON	OFF	OFF
H	L	H	ON	ON	OFF
H	H	H	ON	ON	ON

SEL2 (Pin No. 12)

PS1-1	PS2-2	AUDIO	SW5	AM
L	L	OFF	OFF	OFF
H	L	ON	ON	OFF
H	H	ON	ON	ON

• CD MECHA CONTROL OPERATION

CD LOEJ	CD MOTOR	CD MECHA OPERATION
L	H	Load
H	H	Eject
Hi-Z	L	Stop
Hi-Z	H	Brake

MICROCOMPUTER'S TERMINAL DESCRIPTION

● CD MECHANISM μ -COM : IC2 on X32- (CD PLAYER UNIT)

Pin No.	Active (H/L)	Pin Name	I/O	Application	Processing Operation
1		TVDD	O	Traverse drive output (PWM output).	
2		SPL	O	Spindle motor drive output (PWM output).	
3		NC	-	No connection.	
4		PWM	O	Multipurpose PWM output.	
5		TBAL	O	Tracking balance adjustment output (PWM output).	
6		FBAL	O	Focusing balance adjustment output (PWM output).	
7		NRFDET	I	RF detection signal input.	L : Detection
8		OFT	I	Off-tracking signal input.	H : Detection
9		BDO	I	Drop-out signal input.	H : Detection
10		LDON	O	Laser-on signal output.	H : Focus ON
11		DSL	O	DSL balance output.	
12		DVDD1	-	Power supply for digital circuit.	
13		DVSS1	-	GND for digital circuit.	
14		AVSS2	-	GND for analog circuit.	For DSL, PLL and A/D converter
15		DSL	I/O	Loup filter for DSL and bias output for ARF.	
16		ARF	I	RF signal input.	
17		RFSW	I	DSL circuit time constant switch.	
18		PLL	I/O	Loup filter for PLL.	
19		PLL2	I/O	Loup filter character switch for PLL.	
20		IREF	I	Reference current input.	
21		RFENV	I	RF envelope signal input.	
22		TRCRS	I	Tracking cross signal input.	
23		TE	I	Tracking error signal input.	
24		FE	I	Focusing error signal input.	
25		AVDD2	-	Power supply for analog circuit.	For DSL, PLL and A/D converter
26		AVSS1	-	GND for analog circuit.	For Lch/Rch audio output
27		OUTR	O	Rch audio output.	
28		AVDD1	-	Power supply for analog circuit.	For Lch/Rch audio output
29		OUTL	O	Lch audio output.	
30		DVSS3	-	GND for digital circuit.	
31		CSEL	-		
32		NC	-	No connection.	
33		ASEL	-		
34		MSEL0	-		
35		MSEL1	-		
36-39		NC	-	No connection.	
40		VREFP	-	Reference power supply input for A/D converter.	
41		HOT	-		

MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Active (H/L)	Pin Name	I/O	Application	Processing Operation
42		8EJE SW	-		
43		12EJE/SDET SW	-		
44		LOE/LIM SW	I	Loading-end detection / Pick-up inner circumference detection.	H : Loading-end detection L : Pick-up inner circumference detection
45-49		NC	-	No connection.	
50		DVDD2	-	Power supply for digital circuit.	
51		X1	I	Main clock input.	
52		X2	O	Main clock output.	
53		DVSS2	-	GND for digital circuit.	
54		XSUB1	-		
55		NC	-	No connection.	
56		TEST1	-	Test terminal.	Normal condition : "H" fixed
57		TEST2	-	Test terminal.	Normal condition : "H" fixed
58,59		NC	-	No connection.	
60		DRV MUTE	O	Driver mute control.	L : Mute ON, H : Mute OFF
61	L	MUTE L	O	Audio Lch mute output.	
62	L	MUTE R	O	Audio Rch mute output.	
63	L	RST	I	LSI reset input.	
64		OCD CLK	-		
65	L	MSTOP	I	Standby detection.	
66		DATA	I/O	I2C bus data line (Communication line to system μ -com).	During serial writer is connected.
67		SBIO	I	Data input.	During serial writer is connected.
68	L	CLK	I/O	I2C bus clock line (Communication line to system μ -com).	During serial writer is connected.
69		TX	O	Digital audio interface signal output.	
70		NC	-	No connection.	
71		XSEL	-		
72		MCNT	I	Loading control / Eject control.	L : OFF (Host control), H : Mecha μ -com control
73		P. ON	O	Audio & Servo power supply control.	L : Power supply ON. H : Power supply OFF
74,75		NC	-	No connection.	
76		CD-RW	O	CD-RW control.	H : CD-RW, L : Normal disc
77		NC	-	No connection.	
78		DVDD3	-	Power supply for digital circuit.	
79		FOD	O	Focusing drive output (PWM output).	
80		TRD	O	Tracking drive output (PWM output).	

TEST MODE

How to enter the test mode

While simultaneously press PRESET "1" key and PRESET "3" key, press "RESET" button.

How to release the test mode

Press "RESET" button. (The release cannot be achieved in the conditions of POWER OFF and ACC OFF.)

Initial conditions of the test mode

- The source is "STANDBY".
- The displays all lit up.
- The volume is at -10dB (The display shows "30".)
- LOUD is "OFF".
- SYSTEM Q is "NATURAL".
- BEEP is sounded at all time with the key depressed for less than 1 second.

Special displays when all indicator lights are lighted

When "PRESET" keys are pressed while all indicators for the STANDBY sources are lighted, the following displays will appear.

PRESET "1" key	• Version display (8 digits : month, date, hour, minute) (Display) : x x x x x x x x
PRESET "2" key	• Serial number display (8 digits) (Display) : x x x x x x x x
PRESET "3" key	• When pressed for less than 1 second : POWER ON time display (STANDBY source time is not counted.) (Display) : PON x x x x x MAX 60,000 (hours) * The display is cleared by pressing the key for more than 2 seconds.
PRESET "4" key	• When pressed for less than 1 second : CD operation time display (Display) : PLY x x x x x MAX 60,000 (hours) * The display is cleared by pressing the key for more than 2 seconds.

PRESET "5" key	• When pressed for less than 1 second : CD EJECT number display (Display) : EJC x x x x x MAX 60,000 (times) * The display is cleared by pressing the key for more than 2 seconds.
PRESET "6" key	• When pressed for less than 1 second : Panel open/close number display (Display) : PNL x x x x x MAX 600,000 (times) * The display is cleared by pressing the key for more than 2 seconds.
"FM" key	• ROM CORRECTION version display (Display) Effective : ROM _ Rxxx (x : number) Not effective (When not able to read) : ROM _ R --- Not effective (When version is different) : ROM _ R***
"AM" key	• IC10 adjustment status (Refer to "ADJUSTMENT" on the following page.) (Display) Adjustment complete : E2P _ OK _ _ Adjustment not completed : E2P _ ER _ _ Communication error : I2C _ ER _ _ * When other than "E2P _ OK _ _", Pin No. 30 will become "H".
"◀◀" key	• Mechanism error detection status • Communication error → Error No. 1 → Error No. 2 → Error No. 3 → Communication error (Error No. 1 is the most recent error.) (Display) Communication OK : I2C _ OK _ _ Communication error : I2C _ NG _ _ Not detected : ERR _ n --- (n : 1~3) Detected : ERR _ n-** (** : error code) * The display is cleared by pressing the key for more than 2 seconds.

SPECIAL MODE

ADJUSTMENT

● DC offset error detection confirmation mode

Confirmation mode :

While depressing PRESET “3” key and PRESET “6” key simultaneously, press on the “RESET” button.

(Display) Detected : DC _ ERR _ _

Not detected : DC _ OK _ _ _

- * By pressing “TI” key while “DC _ ERR _ _” is being displayed, detection status is cleared. This will result in the display of “DC _ OK _ _ _”.

Release Method : Press “RESET” button.

● Mechanism memory clear confirmation mode

Confirmation mode :

While depressing “ATT” key and “Q” key simultaneously, press “RESET” button.

(Display) : MEM _ CLR _

- * Two seconds after the confirmation mode boots up, Mechanism memory clear as a result is displayed.

(Display) Clear status display normal completion

: CD _ O _ _ _

Clear status display abnormal completion

: CD _ X _ _ _

Release Method : Press “RESET” button.

After replacing the following parts, adjust as follows.

REPLACED PARTS		ADJUSTMENT ITEMS		
Ref. No.	Function / Parts name	1st AM MIX	2nd AM MIX	FM antenna
IC10	E-VOL & TUNER	YES	YES	YES
IC11	E2PROM	YES	YES	YES
L507	VCO COIL	YES	YES	YES
L508	1st AM MIX IFT	YES	-	-
L509	2nd AM MIX IFT	-	YES	-
L518	FM ANTENNA COIL	-	-	YES
D504	VARIABLE CAPACITANCE DIODE	YES	YES	YES
D506	VARIABLE CAPACITANCE DIODE	YES	YES	YES
X501	CRYSTAL RESONATOR	YES	YES	YES

● 1st AM MIX / 2nd AM MIX ADJUSTMENT

ADJUSTMENT POINT : L508 (1st AM MIX) / L509 (2nd AM MIX)

VOLTAGE VALUE CHECK POINT : S-METER check land (X34-)
Adjust so that S-METER voltage value becomes maximum.

● SG setting

DESTINATION	FREQUENCY	MODULATION	ANTENNA INPUT
Europe	999kHz	OFF	35dB μ V (EMF)
Except Europe	1000kHz	OFF	35dB μ V (EMF)

● FM ANTENNA ADJUSTMENT

ADJUSTMENT POINT : L518

VOLTAGE VALUE CHECK POINT : S-METER check land (X34-)
Adjust so that S-METER voltage value becomes maximum.

● SG setting

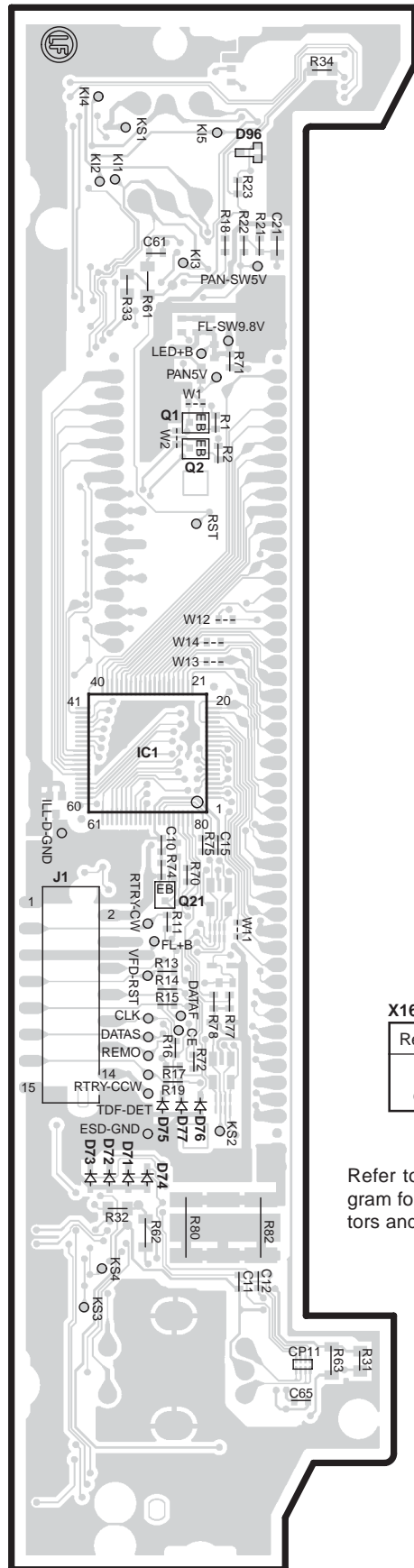
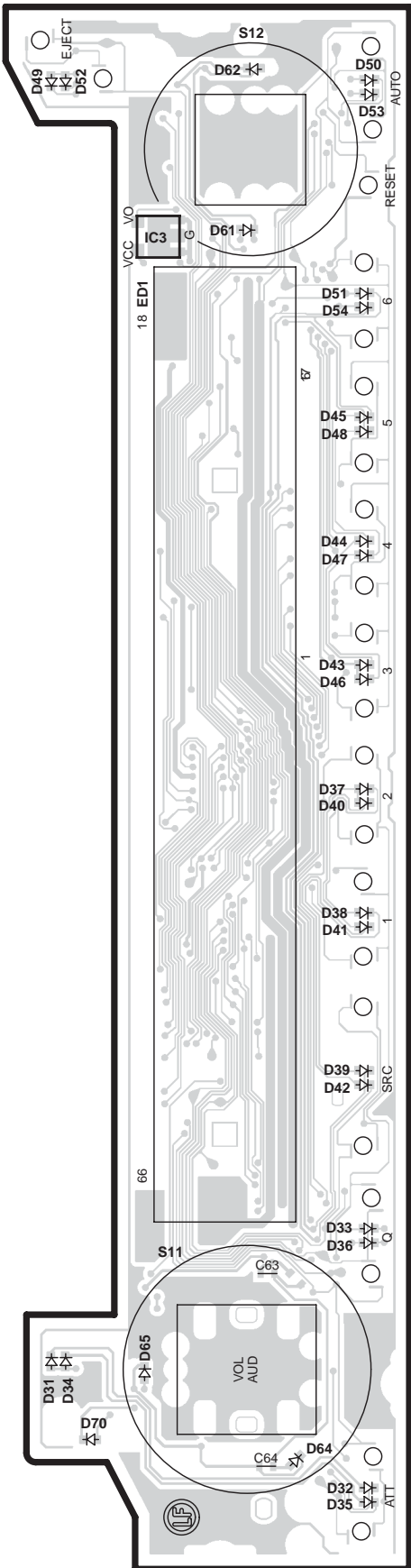
DESTINATION	FREQUENCY	MODULATION	ANTENNA INPUT
Europe	87.5MHz	OFF	5dB μ V (LOAD) or 11dB μ V (EMF)
Except Europe	87.9MHz	OFF	5dB μ V (LOAD) or 11dB μ V (EMF)

PC BOARD (COMPONENT SIDE VIEW)

(FOIL SIDE VIEW)

SWITCH UNIT X16-2932-7x (J76-0055-02)

SWITCH UNIT X16-2932-7x (J76-0055-02)



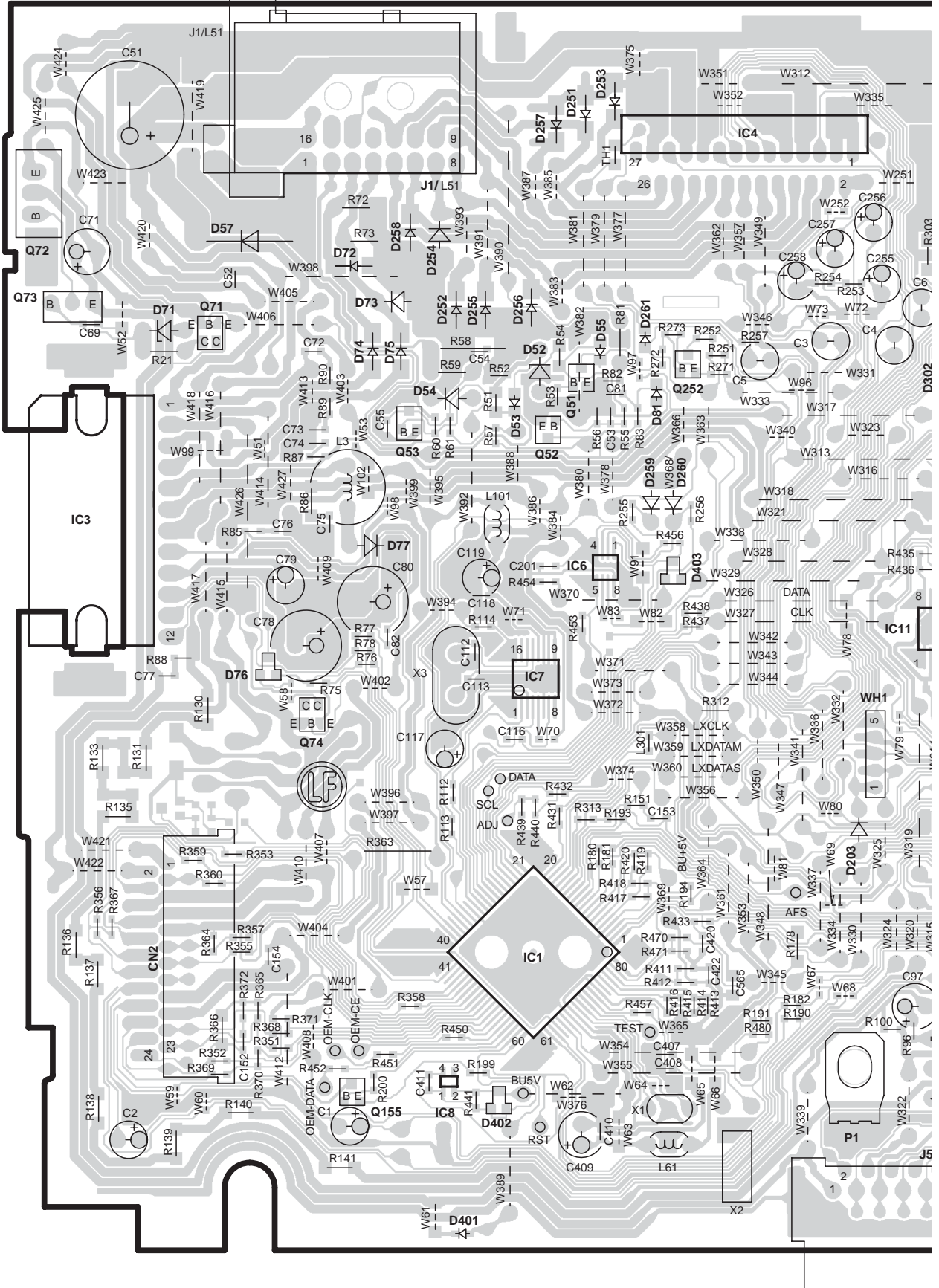
X16-2932-7x

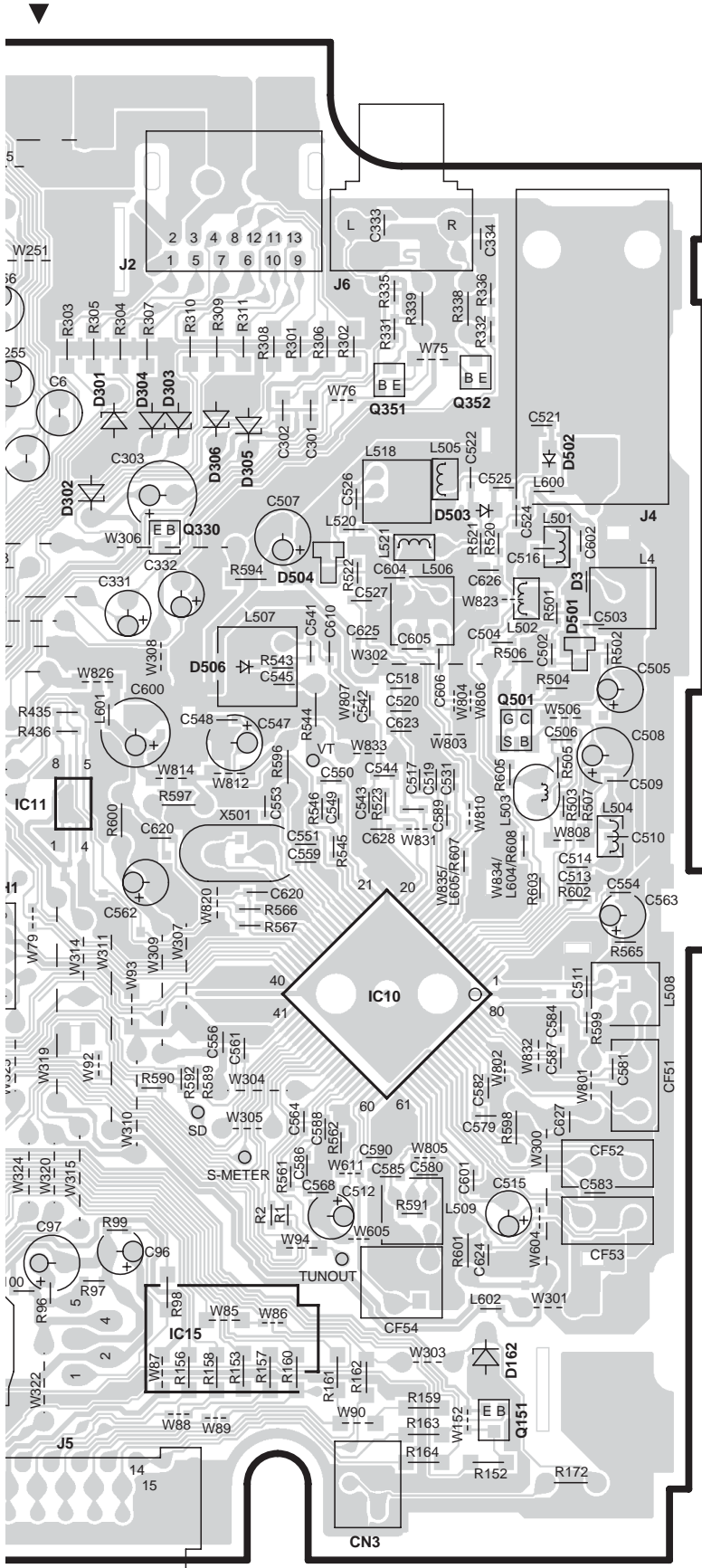
Ref. No.	Address
IC1	4D
Q21	5D

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

PC BOARD (FOIL SIDE VIEW)

ELECTRIC UNIT X34-3412-7x (J76-0048-12)





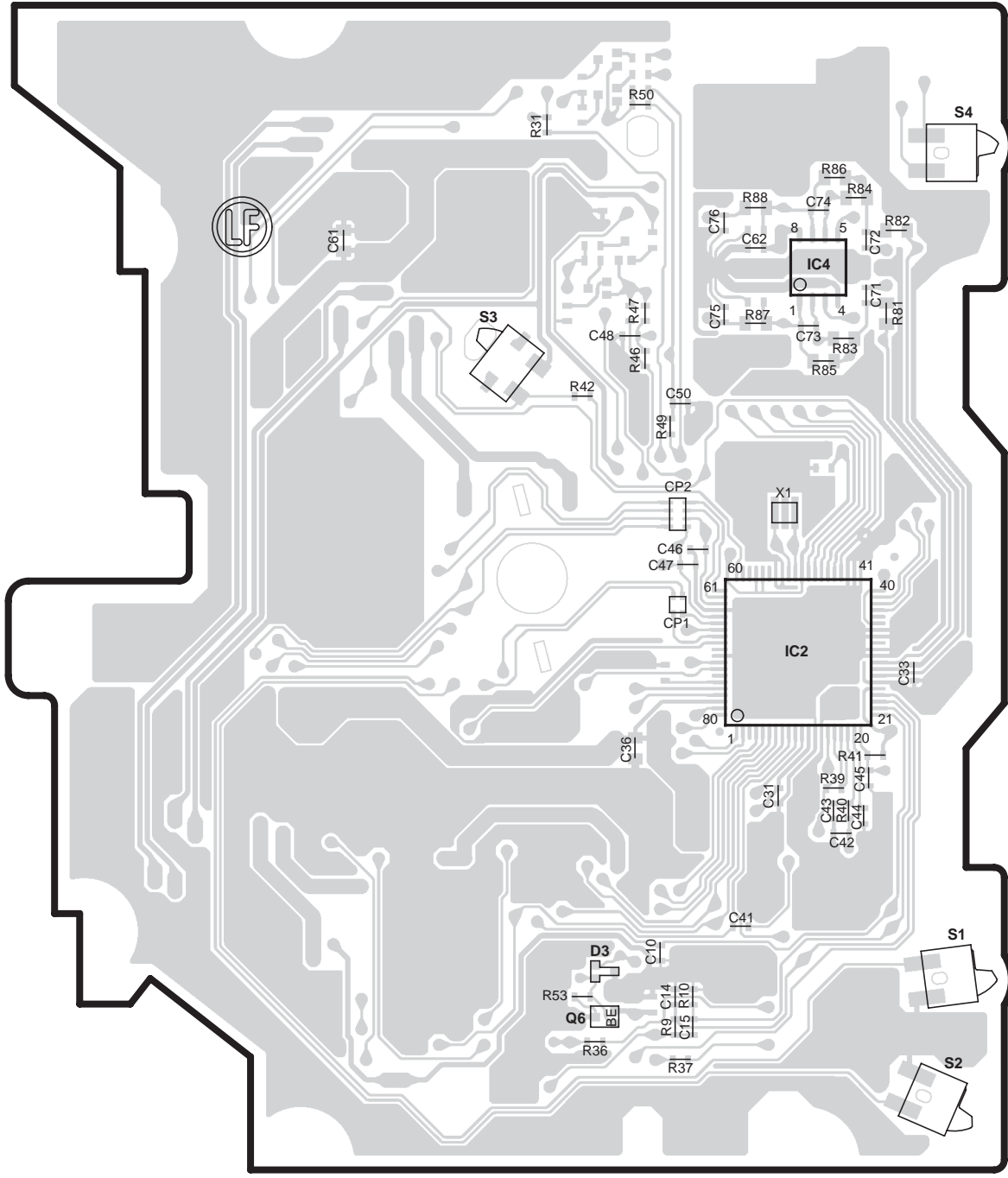
X34-3412-7x

Ref. No.	Address
IC1	6I
IC3	4G
IC4	2J
IC6	4I
IC7	4I
IC8	6H
IC10	5L
IC11	4K
IC15	6K
Q51	3I
Q52	3I
Q53	3H
Q71	3G
Q72	2F
Q73	3F
Q74	5H
Q151	6L
Q155	6H
Q252	3I
Q330	3K
Q351	3L
Q352	3L
Q501	4L

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

PC BOARD (COMPONENT SIDE VIEW)

CD PLAYER UNIT X32-5750-00 (J76-0059-02)



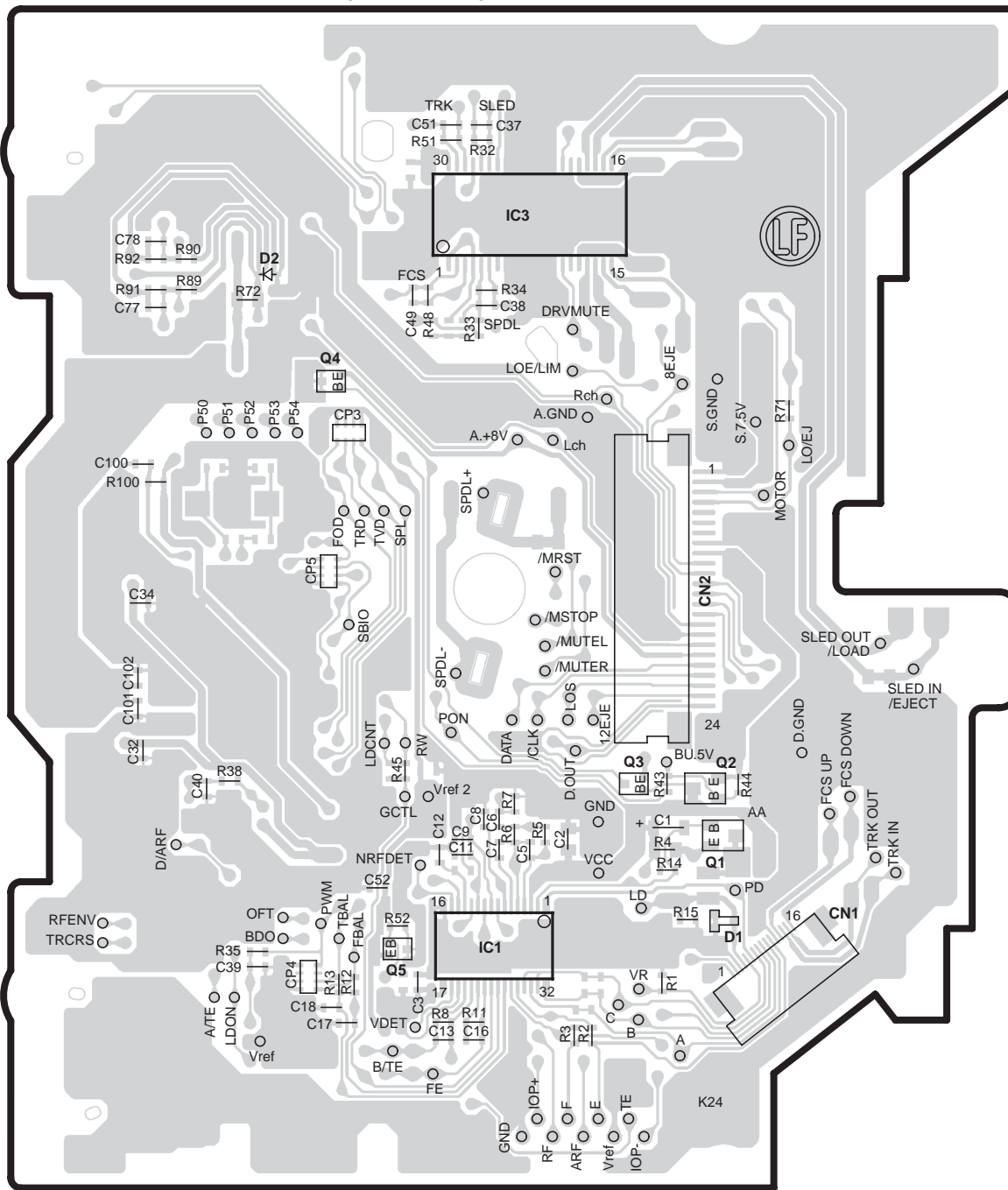
X32-5750-00

Ref. No.	Address
IC2	4S
IC4	2S
Q6	5R

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

PC BOARD (FOIL SIDE VIEW)

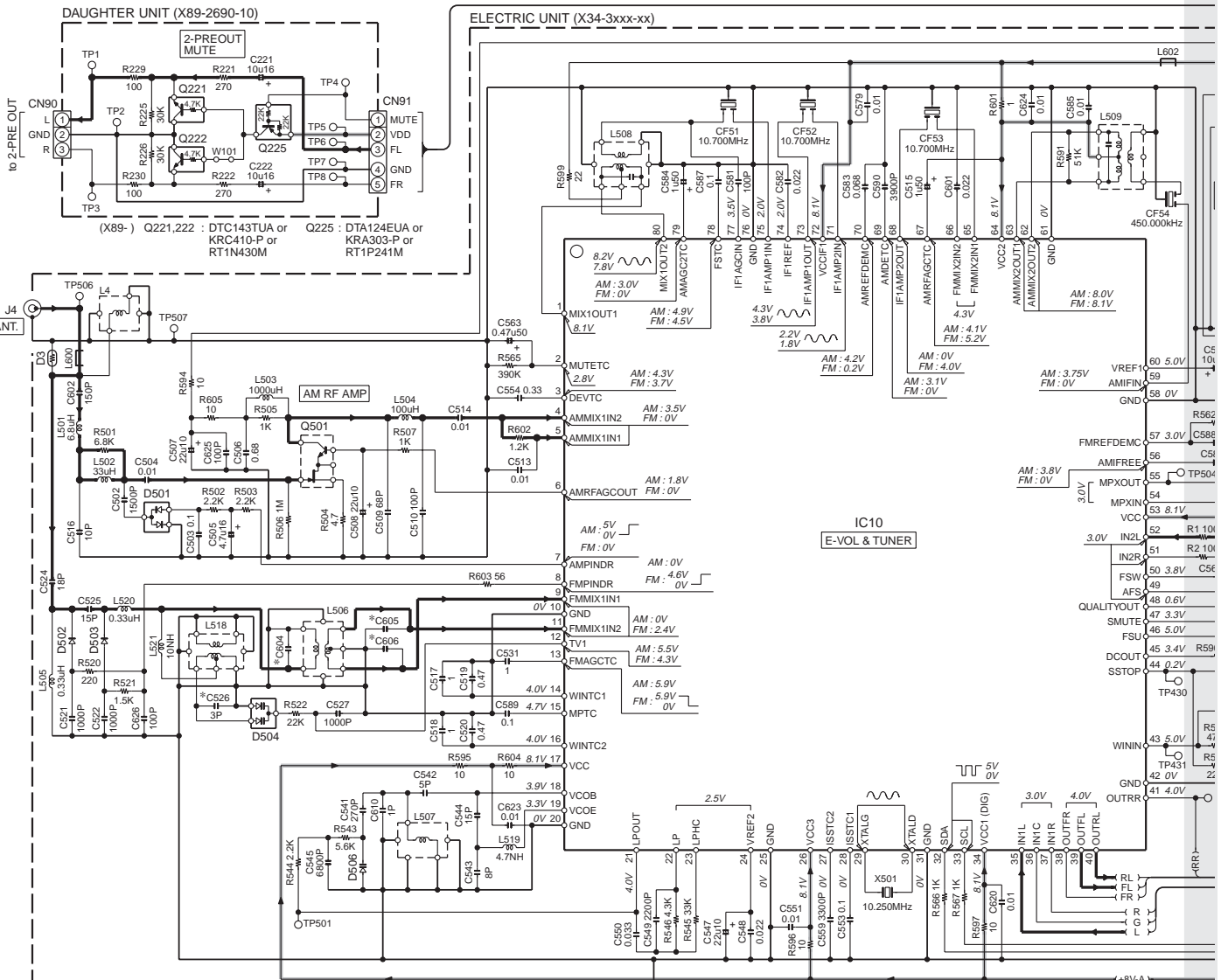
CD PLAYER UNIT X32-5750-00 (J76-0059-02)



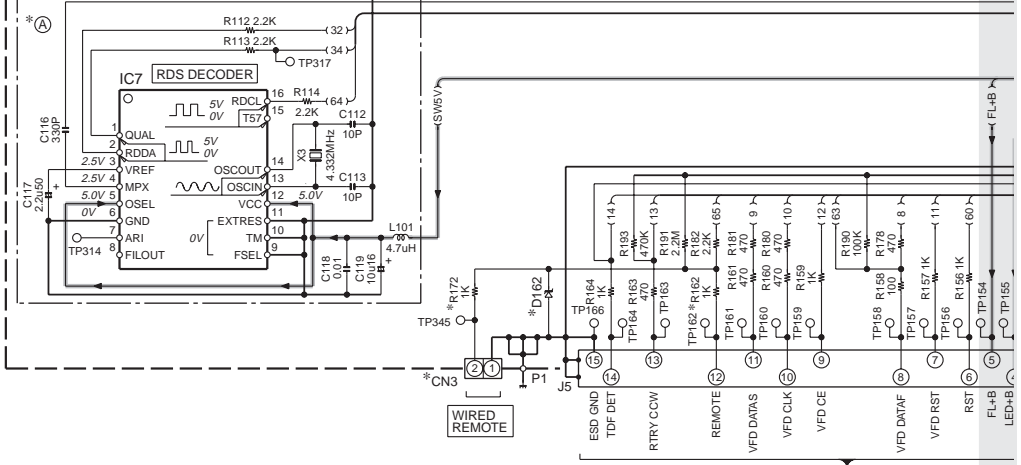
X32-5750-00

Ref. No.	Address
IC1	5W
IC3	2W
Q1	5X
Q2	4X
Q3	4W
Q4	3V
Q5	5V

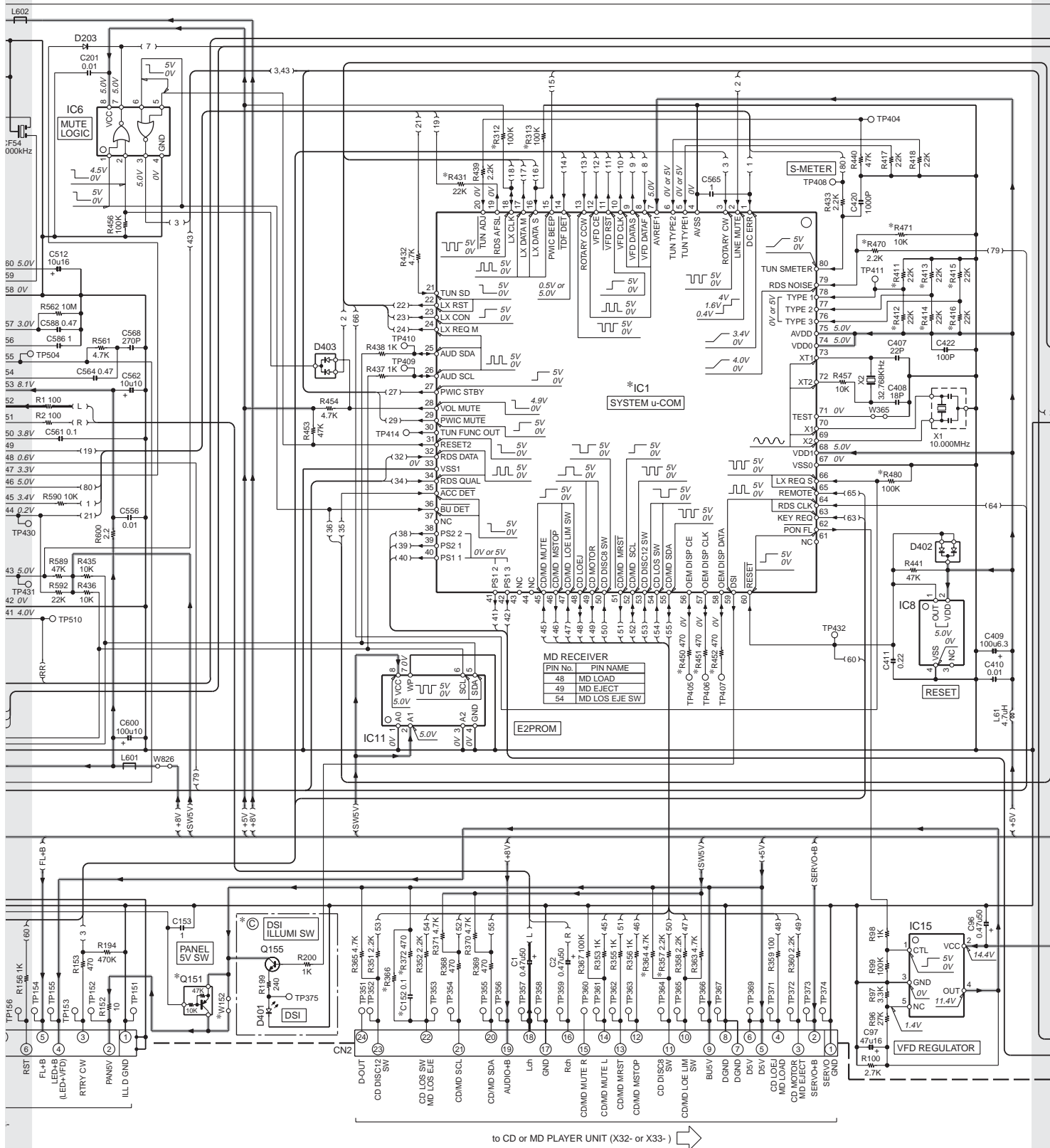
Refer to the schematic diagram for the values of resistors and capacitors.



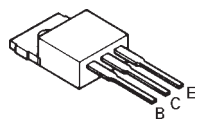
CATEGORY/ FUNCTION	MODEL NAME	DESTI- NATION	DAUGHTER UNIT X89-2690-10
CD RECEIVER (MP3/WMA)	E303/S	J	YES
	KDC-MP2028	K	YES
	KDC-MP228	K	YES
	KDC-MP3029	M	YES
14-SEGMENT DISPLAY	KDC-MP4029/G	M	YES
	KDC-W4031/Y	E	YES
	KDC-W409/Y	E	YES
	KDC-W431GY	E	YES
CD RECEIVER	KDC-W4531/Y	E	YES
	KDC-WF431A	E	YES
	KDC-228	K	YES
	KDC-3029	M	YES
14-SEGMENT DISPLAY	KDC-3029R	M	YES
	KDC-3031A/Y	E	YES
	KDC-3031G/Y	E	YES
	KDC-309A	E	YES
CD RECEIVER	KDC-309G	E	YES
	KDC-F331A	E	YES
	KDC-F331G	E	YES
	E202	J	YES
7-SEGMENT DISPLAY	RDT-101	J	YES
	KDC-1028	K	YES
	KDC-128/CR	K	YES
	KDC-129/S	M	YES
MD RECEIVER	KDC-229	M	YES
	KDC-2031SA/Y	E	YES
	KDC-2031SG/Y	E	YES



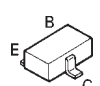
X16-
J1



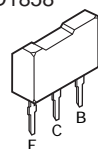
2SB1565



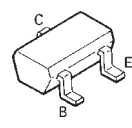
DTA114EE
DTC143TUA
2SA1362
2SA1576A



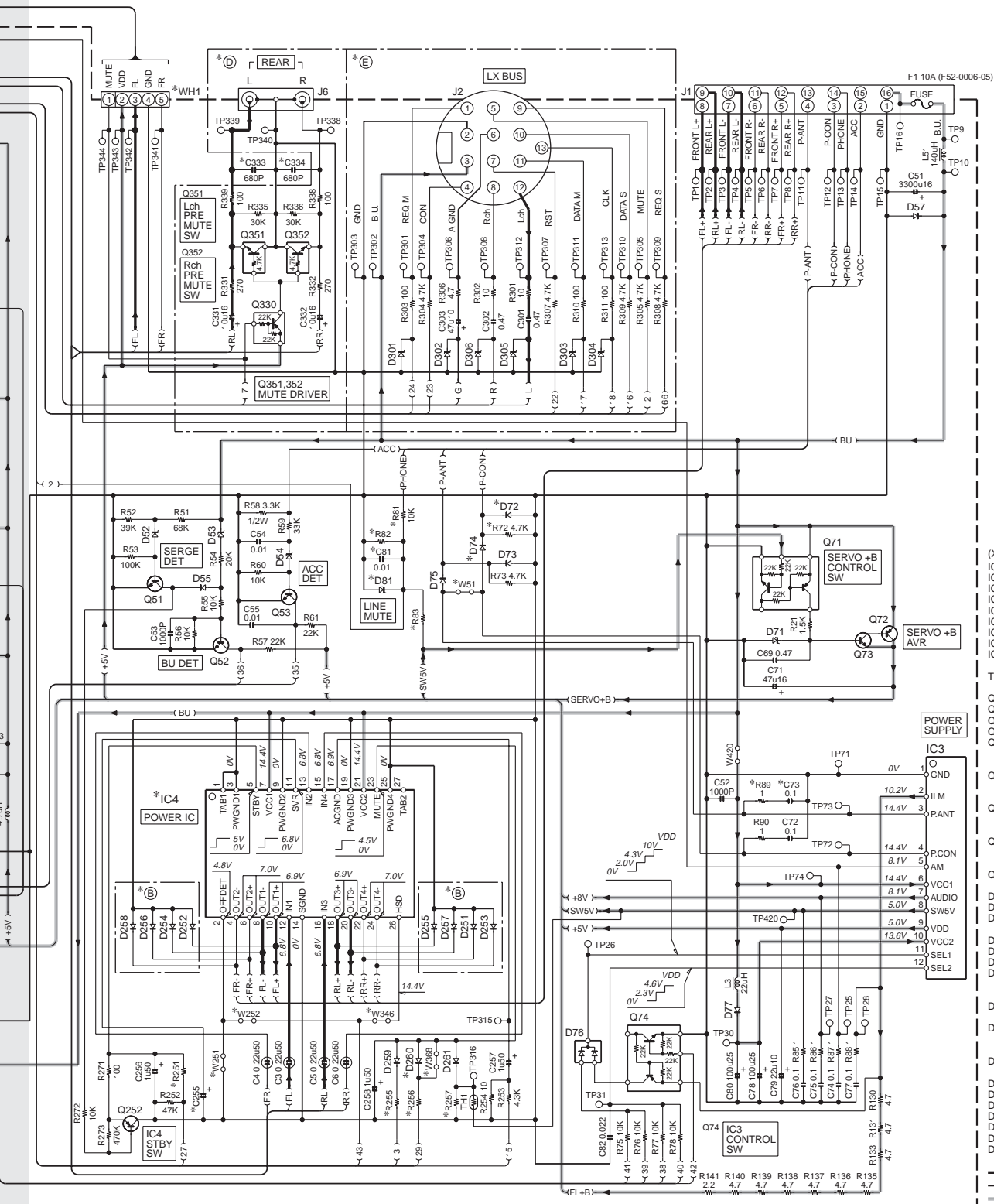
2SD1858



2SC4081

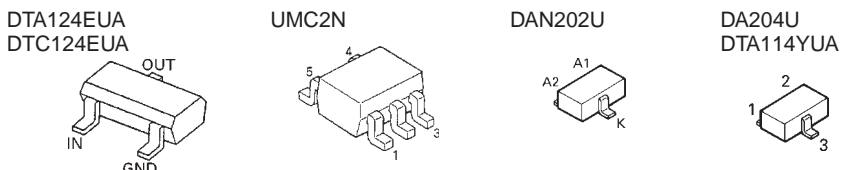


KDC-3031A/3031AY/3031G/3031GY
KDC-309A/309G/F331A/F331G



- (X34 -)
 - IC1 : *
 - IC3 : BD4912-V4
 - IC4 : *
 - IC6 : TC7W02FU-F
 - IC7 : E-TDA7479AD
 - IC8 : S-80836CENN-B
 - IC10 : E-TDA7516
 - IC11 : BR24L04FV-W
 - IC15 : BA00CCWT
- TH1 : PRF21BE4710B2
- Q51-53,155 : 2SC4081
Q71,74 : UMC2N
Q72 : 2SB1565(E,F)
Q73 : 2SD1856
Q151 : DT114YUA or KRA307-P or RT1P144M
- Q252 : 2SA1576A or KTA2014P(Y,GR) or 2SA1063A
- Q330 : DT1A124EUA or KRA303-P or RT1P241M
- Q351,352 : DT1C143TUA or KRC410-P or RT1N430M
- Q501 : HN3G01J(BL)-F
- D3 : IMSA-6801-E
D52,54,305,306 : MAZ4068N-M
D53 : UDZ56.8B or 02D26.8F-Y
D55,261 : 1S3355
D57 : SZV60-A
D71 : MAZ4082N-L
D72,74,75,251-253,255-258 : D1F60-5063 or 1SR154-400
D73,77,254 : AM012NF or 10EDA20
D76,402,403 : DAN202U or KDS121-P or MC2848
D81 : UDZ54.7B or 02D24.7F-Y
D162,301-304 : MAZ4062-L
D203,259,260 : 1S3133
D401 : B30-1567-05
D501 : RN739F
D502,503 : KP231HETR-G
D504 : KP1430STL-G
D506 : HVC383B-E

KDC-3031A/3031AY/3031G/3031GY/309A/309G/F331A/F331G (1/2)



(X34-3xxx-xx)

Table with columns: CATEGORY/FUNCTION, MODEL NAME, DESTINATION, X34-340x-xx, X34-341x-xx, X34-365x-xx, A, B, C, D, E, C73, C81, C152, C255, C333, 334, C526, C604, C605, 606, CN3, D72, 74, D81, D162, D260, Q151, IC1. Rows include CD RECEIVER (MP3/WMA), 14-SEGMENT DISPLAY, CD RECEIVER, 14-SEGMENT DISPLAY, CD RECEIVER, 7-SEGMENT DISPLAY, and MD RECEIVER.

Table with columns: CATEGORY/FUNCTION, MODEL NAME, DESTINATION, X34-340x-xx, X34-341x-xx, X34-365x-xx, IC4, R72, R81, R82, R83, R89, R162, R172, R251, R255, R256, R257, R312, 313, 480, R357, 364, R366, R372, R411, R412, R413, R414. Rows include CD RECEIVER (MP3/WMA), 14-SEGMENT DISPLAY, CD RECEIVER, 14-SEGMENT DISPLAY, CD RECEIVER, 7-SEGMENT DISPLAY, and MD RECEIVER.

Table with columns: CATEGORY/FUNCTION, MODEL NAME, DESTINATION, X34-340x-xx, X34-341x-xx, X34-365x-xx, R415, R416, R431, 470, R450, 482, R471, W51, W152, W251, 346, 368, W252, WH1. Rows include CD RECEIVER (MP3/WMA), 14-SEGMENT DISPLAY, CD RECEIVER, 14-SEGMENT DISPLAY, CD RECEIVER, 7-SEGMENT DISPLAY, and MD RECEIVER.

CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

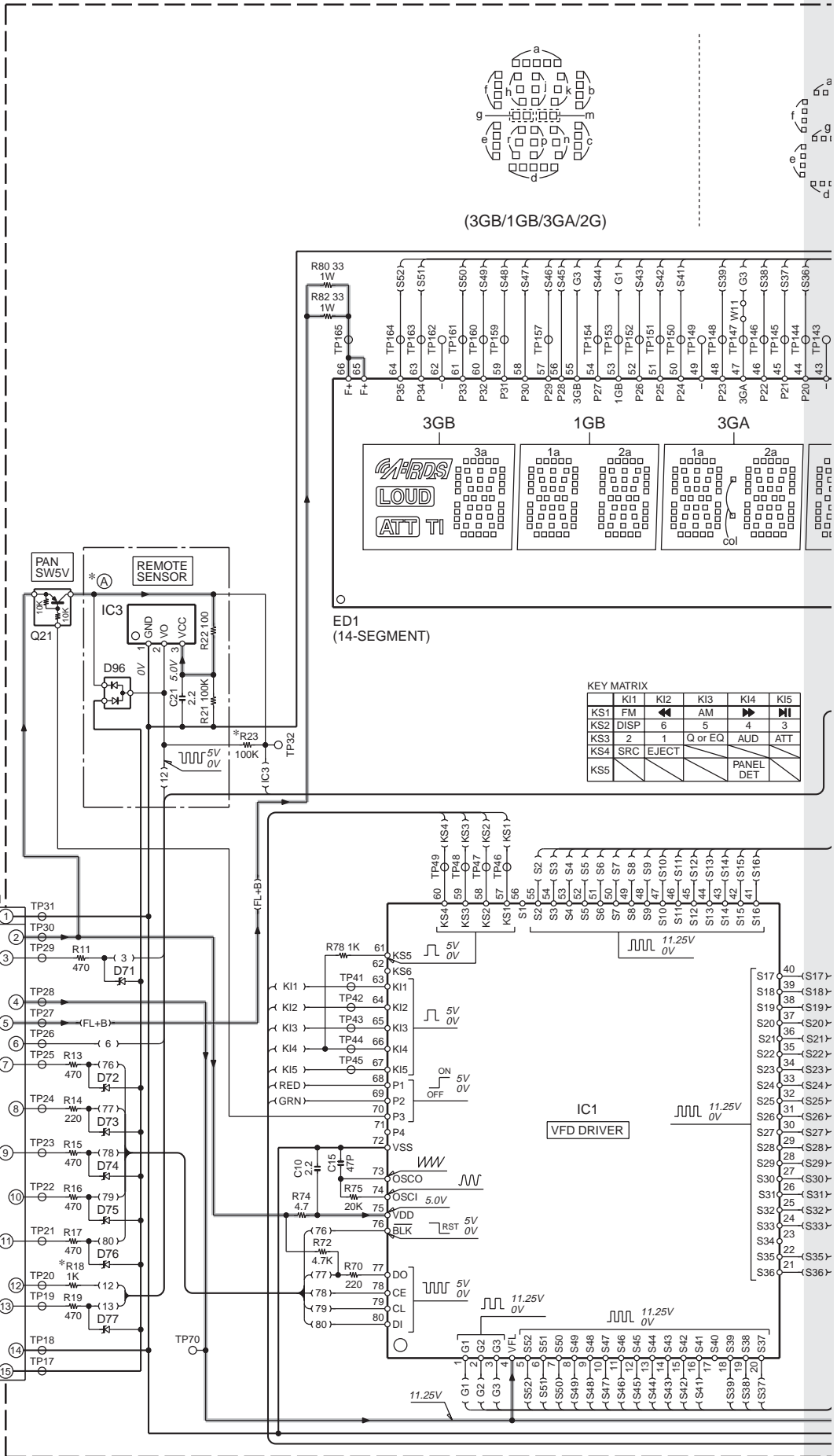
⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

ANODE CONNECTION

PIN NAME	3GA,3GB	2G	1GA,1GB
P1	—	col (Downside)	S1
P2	2d	2d	2d
P3	1d	1d	1d
P4	2n	2n	2n
P5	1n	1n	1n
P6	2p	2p	2p
P7	1p	1p	1p
P8	2r	2r	2r
P9	1r	1r	1r
P10	2e	2e	2e
P11	1e	1e	1e
P12	2c	2c	2c
P13	1c	1c	1c
P14	2g	2g	2g
P15	1g	1g	1g
P16	2m	2m	2m
P17	1m	1m	1m
P18	2f	2f	2f
P19	1f	1f	1f
P20	2a	2a	2a
P21	1a	1a	1a
P22	2h	2h	2h
P23	1h	1h	1h
P24	2j	2j	2j
P25	1j	1j	1j
P26	2k	2k	2k
P27	1k	1k	1k
P28	2b	2b	2b
P29	1b	1b	1b
P30		col (Upside)	S2
P31		—	S3
P32		—	S4
P33		—	S5
P34	—	—	S6
P35	col	Dp	S7
P36	3d	3d	S8
P37	3n	3n	S9
P38	3p	3p	S10
P39	3r	3r	PTY
P40	3e	3e	
P41	3c	3c	
P42	3g	3g	gh
P43	3m	3m	d
P44	3f	3f	e
P45	3b	3b	c
P46	3k	3k	g
P47	3j	3j	f
P48	3h	3h	b
P49	3a	3a	a

SWITCH UNIT (X16-293x-xx)



(3GB/1GB/3GA/2G)

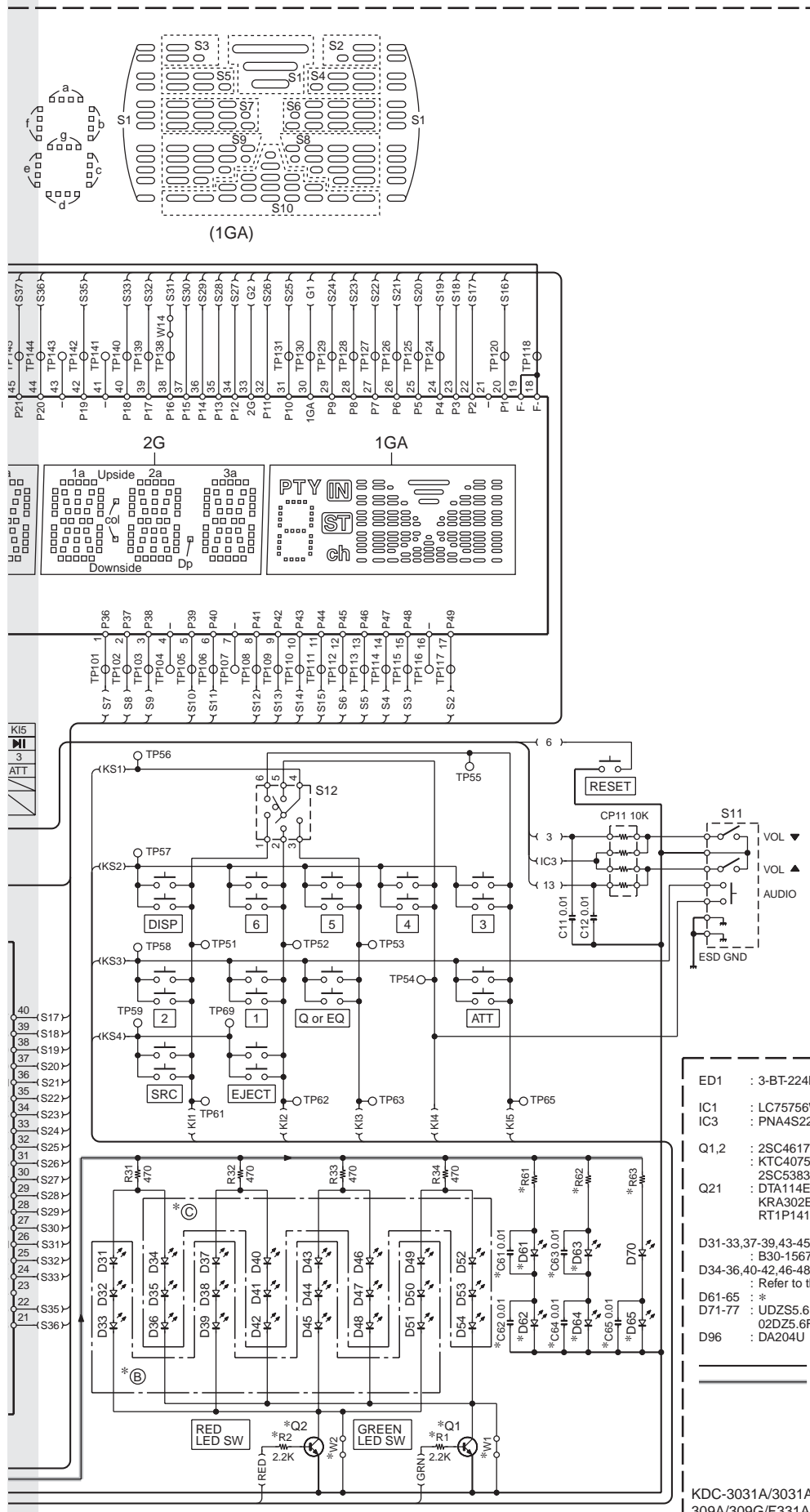
KEY MATRIX

	K11	K12	K13	K14	K15
KS1	FM	◀	AM	▶	3
KS2	DISP	6	5	4	3
KS3	2	1	Q or EQ	AUD	ATT
KS4	SRC	EJECT	PANEL DET		
KS5					

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.



CATEGORY / FUNCTION	MODEL NAME	DEST. NATION	UNIT No.	(A)	(B)	(C)	C61-65	D61-65	Q1,2	R1,2	R18	R23	R61	R62	R63	W1	W2	
CD RECEIVER (MP3/MMA)	E303/S	J	0-01	YES	YES	YES	YES	B30-1729-05	—	—	—	—	300	300	470	—	—	
	KDC-MP2028	K	0-10	YES	YES	YES	YES	B30-1729-05	—	—	—	—	300	300	470	—	—	
	KDC-MP3029	M	0-23	YES	—	—	—	B30-1533-05	—	—	—	—	620	560	560	YES	—	
	KDC-MP4029/G	M	0-21	YES	—	—	—	B30-1729-05	—	—	—	—	300	300	470	—	—	
14-SEGMENT DISPLAY	KDC-W409/Y	E	2-72	—	YES	YES	YES	B30-1729-05	YES	YES	YES	YES	300	300	470	—	—	
	KDC-W431/GY	E	2-74	—	YES	YES	YES	B30-1533-05	—	—	—	—	YES	YES	620	560	560	YES
	KDC-WF431/A	E	2-75	YES	YES	YES	YES	B30-1729-05	YES	YES	YES	YES	300	300	470	—	—	
	KDC-228	K	0-22	YES	YES	YES	YES	B30-1567-05	—	—	—	—	1K	680	680	—	—	
CD RECEIVER	KDC-2029	M	0-23	YES	—	—	—	B30-1533-05	—	—	—	—	620	560	560	YES	—	
	KDC-3029R	M	0-22	YES	YES	YES	YES	B30-1567-05	—	—	—	—	1K	680	680	—	—	
	KDC-3031AY	M	0-22	YES	—	—	—	B30-1567-05	—	—	—	—	YES	YES	1K	680	680	YES
	KDC-3031GY	E	2-73	—	YES	—	—	B30-1533-05	—	—	—	—	YES	YES	620	560	560	YES
14-SEGMENT DISPLAY	KDC-309A	E	2-74	—	YES	—	—	B30-1567-05	—	—	—	—	YES	YES	1K	680	680	YES
	KDC-F331/A	E	2-73	—	YES	—	—	B30-1533-05	—	—	—	—	YES	YES	620	560	560	YES
	KDC-F331/G	E	2-74	—	YES	—	—	B30-1533-05	—	—	—	—	YES	YES	620	560	560	YES
MD RECEIVER	E303MD	J	0-02	—	YES	YES	YES	B30-1729-05	—	—	—	—	300	300	470	—	—	

(X16-2933x-xx)

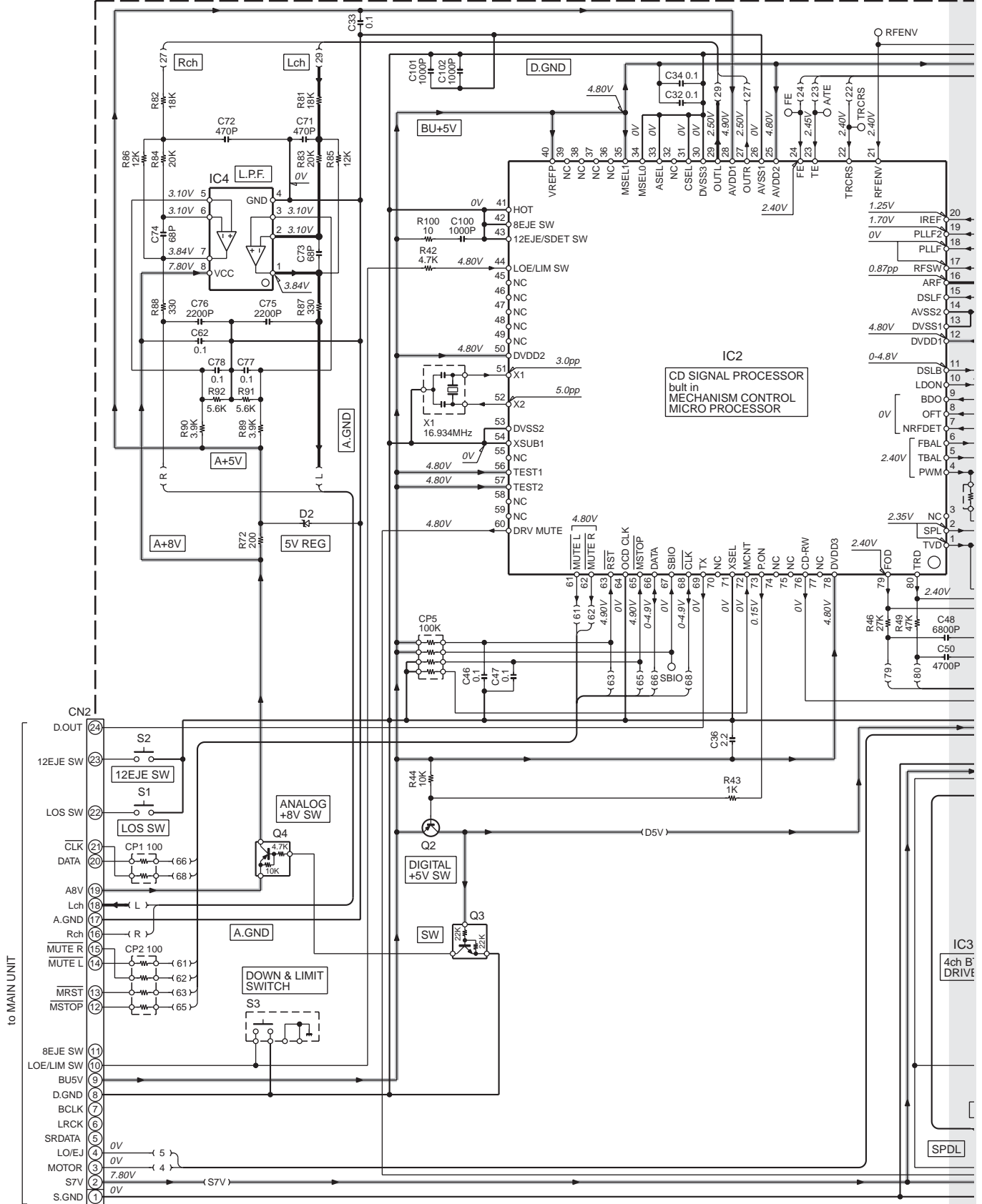
- ED1 : 3-BT-224N
- IC1 : LC75756W
- IC3 : PNA4S22M
- Q1,2 : 2SC4617 or KTC4075EP(Y,GR or 2SC5383(E,F)
- Q21 : DTA114EE or KRA302E-P or RT1P141U
- D31-33,37-39,43-45,49-51,70 : B30-1567-05 (COLOR:RED)
- D34-36,40-42,46-48,52-54 : Refer to the parts list.
- D61-65 : *
- D71-77 : UDZS5.6B or 02DZ5.6F-Y
- D96 : DA204U

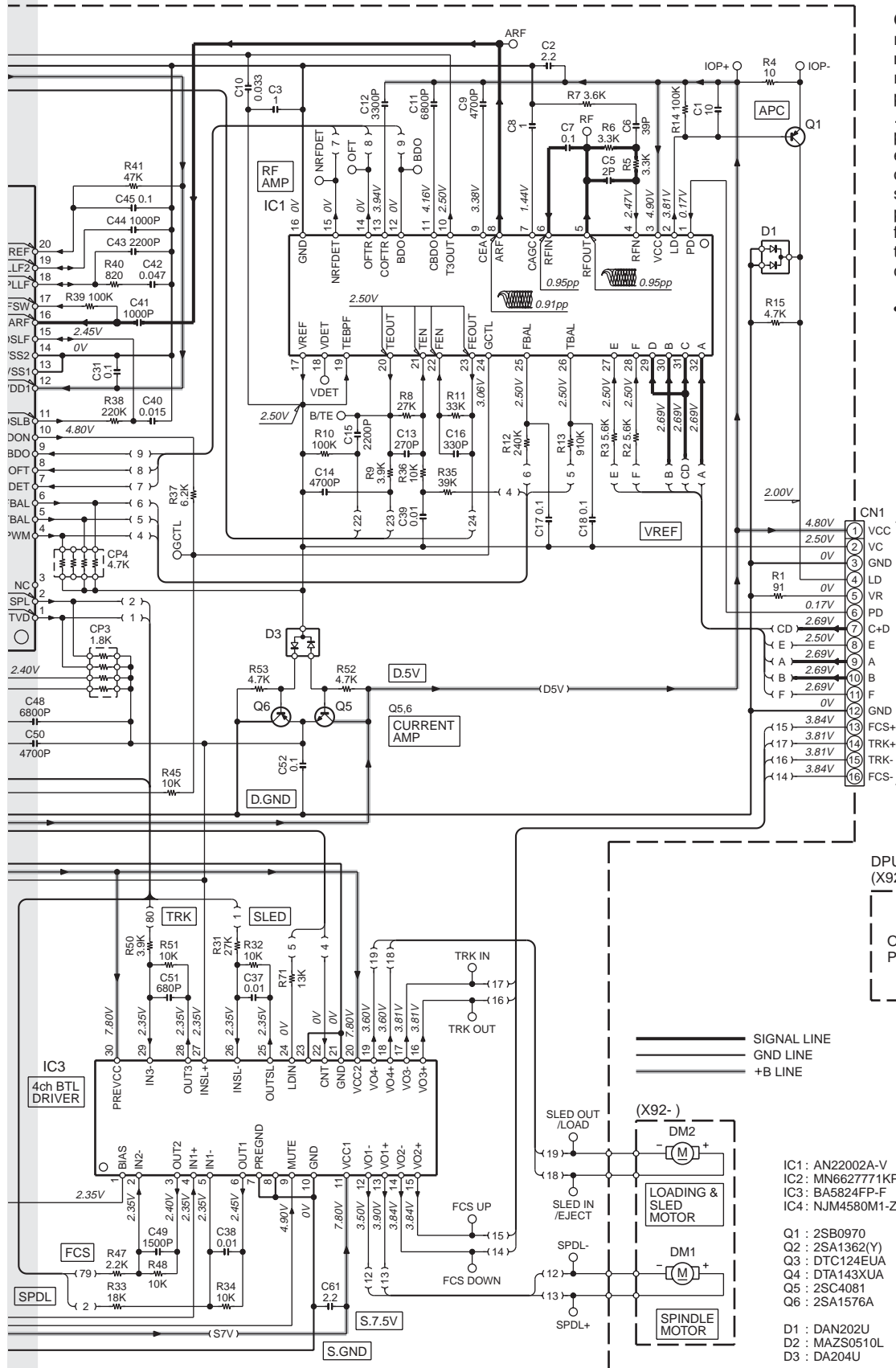


KDC-3031A/3031AY/3031G/3031GY/
309A/309G/F331A/F331G (2/2)

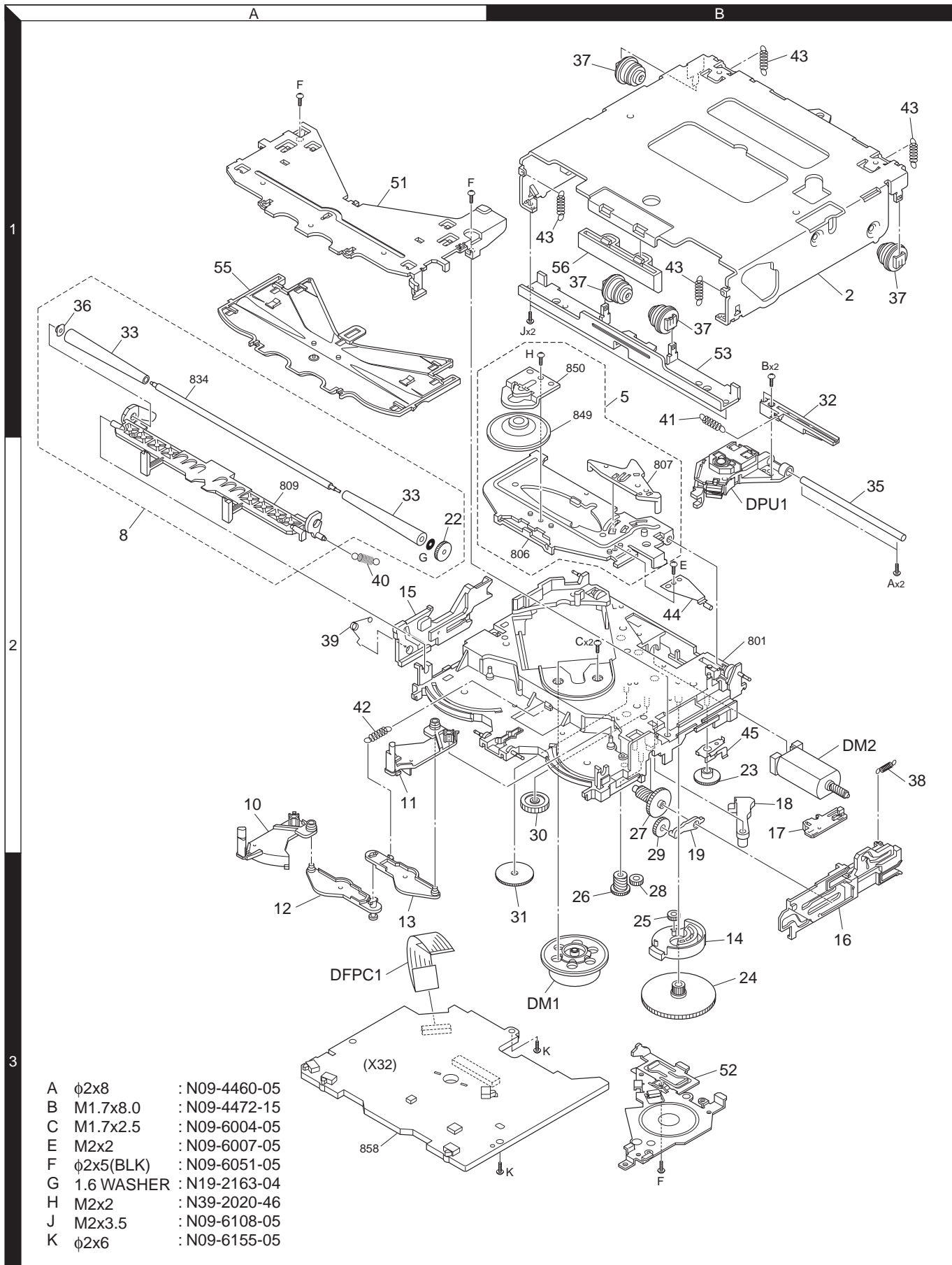
KDC-3031A/3031AY/3031G/3031GY
KDC-309A/309G/F331A/F331G

CD PLAYER UNIT (X32-5750-00)

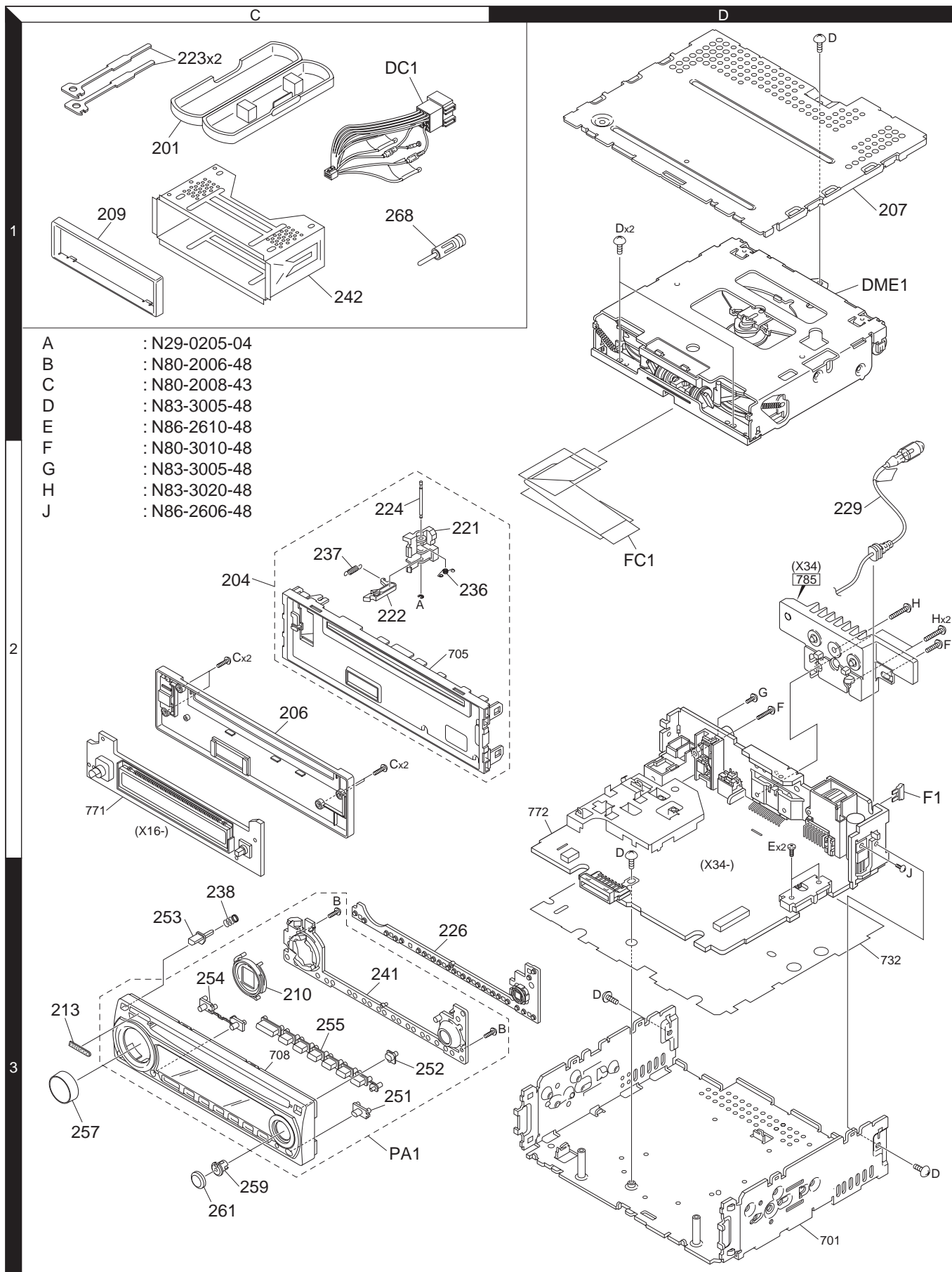




EXPLODED VIEW (CD MECHANISM)



EXPLODED VIEW (UNIT)



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.

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
KDC-3031A/3031AY/3031G/3031GY/309A/309G/F331A/F331G					
201	1C	*	A02-2736-03	PLASTIC CABINET ASSY	
204	2C		A22-2863-13	SUB PANEL ASSY	
206	2C	*	A46-1815-01	REAR COVER	
207	1D	*	A52-0804-12	TOP PLATE	
PA1	3C	*	A64-3458-12	PANEL ASSY	E4E5E6
PA1	3C	*	A64-3458-12	PANEL ASSY	E7
PA1	3C	*	A64-3459-12	PANEL ASSY	EE1
PA1	3C	*	A64-3460-02	PANEL ASSY	E2E3
-			B46-0100-50	WARRANTY CARD	E1E2E3
-			B46-0100-50	WARRANTY CARD	E4E5E
-			B46-0182-14	ID CARD	E1E2E3
-			B46-0182-14	ID CARD	E4E5E
-			B46-0606-04	ID CARD	E6E7
-		*	B64-2932-00	INST. MANUAL (ENGLISH)	E1E6E7
-		*	B64-2932-00	INST. MANUAL (ENGLISH)	E4E5E
-		*	B64-2933-00	INST. MANUAL (FRE, GER)	E1E2E3
-		*	B64-2933-00	INST. MANUAL (FRE, GER)	E4E5E
-		*	B64-2934-00	INST. MANUAL (DUT, ITA)	E1
-		*	B64-2934-00	INST. MANUAL (DUT, ITA)	E4E5E
-		*	B64-2935-00	INST. MANUAL (SPA, POR)	E1
-		*	B64-2935-00	INST. MANUAL (SPA, POR)	E4E5E
-		*	B64-2936-00	INST. MANUAL (RUSSIAN)	E6E7
-		*	B64-2939-00	INST. MANUAL (POL, CZE, HUN)	E6E7
-		*	B64-2940-00	INST. MANUAL (CRO, SLO)	E6E7
209	1C	*	B07-3122-01	ESCUTCHEON	E3E6E7
209	1C	*	B07-3122-01	ESCUTCHEON	E4E5E2
209	1C	*	B07-3123-01	ESCUTCHEON	EE1
210	3C	*	B19-2304-03	LIGHTING BOARD	
213	3C		B43-1518-04	BADGE	
221	2C		D10-4446-03	LEVER	
222	2C		D10-4447-03	LEVER	
223	1C		D10-4589-04	LEVER	
224	2C		D21-2329-04	SHAFT	
226	3C	*	E29-2027-02	CONDUCTIVE RUBBER	
229	2D	*	E30-6402-05	CORD WITH CONNECTOR	
△ DC1	1C	*	E30-6413-05	DC CORD	
△ DC1	1C	*	E30-6427-05	DC CORD	
FC1	2D	*	E39-0718-05	FLAT CABLE	
△ F1	2D		F52-0006-05	FUSE (MINI BLADE TYPE) (10A)	
△ F1	2D		F52-0023-05	FUSE (MINI BLADE TYPE) (10A)	
236	2C		G01-2987-04	TORSION COIL SPRING	
237	2C		G01-3096-04	EXTENSION SPRING	
238	3C	*	G01-3244-04	COMPRESSION SPRING	
-			H10-4919-12	POLYSTYRENE FOAMED FIXTURE	
-			H25-0329-04	PROTECTION BAG (280X450X0.03)	E6E7
-			H25-0337-04	PROTECTION BAG (180X300X0.03)	
-			H25-1111-04	PROTECTION BAG (280X450X0.03)	E1E2E3
-			H25-1111-04	PROTECTION BAG (280X450X0.03)	E4E5E
-		*	H54-3302-03	ITEM CARTON CASE (KDC-3031A)	E4
-		*	H54-3303-03	ITEM CARTON CASE (KDC-3031G)	E5
-		*	H54-3304-03	ITEM CARTON CASE (KDC-309A)	E

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
-		*	H54-3305-03	ITEM CARTON CASE (KDC-309G)	E1
-		*	H54-3306-03	ITEM CARTON CASE (KDC-F331A)	E2
-		*	H54-3307-03	ITEM CARTON CASE (KDC-F331G)	E3
-		*	H54-3313-03	ITEM CARTON CASE (KDC-3031AY)	E6
-		*	H54-3314-03	ITEM CARTON CASE (KDC-3031GY)	E7
241	3C	*	J19-7046-01	HOLDER	
242	1C		J21-9716-03	MOUNTING HARDWARE ASSY	
251	3C	*	K24-4279-04	PUSH KNOB (TI)	
252	3C	*	K24-4280-04	PUSH KNOB (EJECT)	
253	3C	*	K24-4281-04	PUSH KNOB (RELEASE)	
254	3C	*	K25-1689-03	PUSH KNOB (ATT/Q)	
255	3C	*	K25-1690-02	PUSH KNOB (SRC/PRESET/RESET)	
257	3C	*	K29-7132-03	KNOB ASSY (VOL)	
259	3C	*	K29-7134-03	KNOB BASE (FM/AM)	
261	3C	*	K29-7140-03	KEY TOP (FM/AM)	
A	2C		N29-0205-04	RETAINING RING (1.5)	
B	3C		N80-2006-48	PAN HEAD TAPTITE SCREW	
C	2C		N80-2008-43	PAN HEAD TAPTITE SCREW	
D	3D	*	N83-3005-48	PAN HEAD TAPTITE SCREW	
E	2D	*	N86-2610-48	BINDING HEAD TAPTITE SCREW	
268	1C		T90-0523-05	ANTENNA ADAPTOR	
268	1C		T90-0534-05	ANTENNA ADAPTOR	
DME1	1D	*	X92-5090-00	MECHANISM ASSY	
SWITCH UNIT (X16-2932-7x)					
D31-33			B30-1567-05	LED (RED)	E4EE2
D31-33			B30-1567-05	LED (RED)	E6
D34-36			B30-1533-05	LED (PG)	E5E1E3
D34-36			B30-1533-05	LED (PG)	E7
D37-39			B30-1567-05	LED (RED)	E4EE2
D37-39			B30-1567-05	LED (RED)	E6
D40-42			B30-1533-05	LED (PG)	E5E1E3
D40-42			B30-1533-05	LED (PG)	E7
D43-45			B30-1567-05	LED (RED)	E4EE2
D43-45			B30-1567-05	LED (RED)	E6
D46-48			B30-1533-05	LED (PG)	E5E1E3
D46-48			B30-1533-05	LED (PG)	E7
D49-51			B30-1567-05	LED (RED)	E4EE2
D49-51			B30-1567-05	LED (RED)	E6
D52-54			B30-1533-05	LED (PG)	E5E1E3
D52-54			B30-1533-05	LED (PG)	E7
D61-65			B30-1533-05	LED (PG)	E7
D61-65			B30-1533-05	LED (PG)	E7
D61-65			B30-1567-05	LED (RED)	E4EE2
D61-65			B30-1567-05	LED (RED)	E6
D70			B30-1567-05	LED (RED)	
C10			CK73GB0J225K	CHIP C 2.2UF K	
C11,12			CK73GB1H103K	CHIP C 0.010UF K	
C15			CC73GCH1H470J	CHIP C 47PF J	
J1		*	E59-0840-05	RECTANGULAR PLUG	
CP11			RK74HB1J103J	CHIP-COM 10K J 1/16W	
R11			RK73GB2A471J	CHIP R 470 J 1/10W	

E : KDC-309A E1 : KDC-309G E2 : KDC-F331A E3 : KDC-F331G
E4 : KDC-3031A E5 : KDC-3031G E6 : KDC-3031AY E7 : KDC-3031GY

△ Indicates safety critical components.

PARTS LIST

SWITCH UNIT (X16-2932-7x)

Ref. No.	Add	New	Parts No.	Description	Destination
R13			RK73GB2A471J	CHIP R 470 J 1/10W	
R14			RK73GB2A221J	CHIP R 220 J 1/10W	
R15-17			RK73GB2A471J	CHIP R 470 J 1/10W	
R18			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R19			RK73GB2A471J	CHIP R 470 J 1/10W	
R23			RK73GB2A104J	CHIP R 100K J 1/10W	
R31-34			RK73FB2B471J	CHIP R 470 J 1/8W	
R61			RK73EB2E102J	CHIP R 1.0K J 1/4W	E4EE2
R61			RK73EB2E102J	CHIP R 1.0K J 1/4W	E6
R61			RK73EB2E621J	CHIP R 620 J 1/4W	E5E1E3
R61			RK73EB2E621J	CHIP R 620 J 1/4W	E7
R62,63			RK73EB2E561J	CHIP R 560 J 1/4W	E5E1E3
R62,63			RK73EB2E561J	CHIP R 560 J 1/4W	E7
R62,63			RK73EB2E681J	CHIP R 680 J 1/4W	E4EE2
R62,63			RK73EB2E681J	CHIP R 680 J 1/4W	E6
R70			RK73GB2A221J	CHIP R 220 J 1/10W	
R72			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R74			RK73GB2A4R7J	CHIP R 4.7 J 1/10W	
R75			RK73GB2A203J	CHIP R 20K J 1/10W	
R78			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R80		*	RK73SB3A330J	CHIP R 33 J 1W	
R82		*	RK73SB3A330J	CHIP R 33 J 1W	
W1			R92-1252-05	CHIP R 0 OHM J 1/16W	E5E1E3
W1			R92-1252-05	CHIP R 0 OHM J 1/16W	E7
W2			R92-1252-05	CHIP R 0 OHM J 1/16W	E4EE2
W2			R92-1252-05	CHIP R 0 OHM J 1/16W	E6
W11			R92-1252-05	CHIP R 0 OHM J 1/16W	
W14			R92-1252-05	CHIP R 0 OHM J 1/16W	
S12			S70-0106-05	TACT SWITCH	
S11		*	T99-0457-05	ROTARY ENCODER	
D71-77			UDZS5.6B	ZENER DIODE	
D71-77		*	02DZ5.6F-Y	ZENER DIODE	
ED1		*	3-BT-224N	FLUORESCENT INDICATOR TUBE	
IC1		*	LC75756W	MOS-IC	
Q21			DTA114EE	DIGITAL TRANSISTOR	
Q21		*	KRA302E-P	DIGITAL TRANSISTOR	
Q21			RT1P141U	TRANSISTOR	
CD PLAYER UNIT (X32-5750-00)					
C1			C93-1215-05	CERAMIC 10UF K	
C2			CK73FB1A225K	CHIP C 2.2UF K	
C3			CK73GB0J105K	CHIP C 1.0UF K	
C5			CC73GCH1H020C	CHIP C 2.0PF C	
C6			CC73GCH1H390J	CHIP C 39PF J	
C7			CK73GB1C104K	CHIP C 0.10UF K	
C8			CK73GB0J105K	CHIP C 1.0UF K	
C9			CK73GB1H472K	CHIP C 4700PF K	
C10			CK73GB1C333K	CHIP C 0.033UF K	
C11			CK73GB1H682K	CHIP C 6800PF K	
C12			CK73GB1H332K	CHIP C 3300PF K	
C13			CC73GCH1H271J	CHIP C 270PF J	
C14			CK73GB1H472K	CHIP C 4700PF K	
C15			CK73GB1H222K	CHIP C 2200PF K	
C16			CC73GCH1H331J	CHIP C 330PF J	

Ref. No.	Add	New	Parts No.	Description	Destination
C17,18			CK73GB1C104K	CHIP C 0.10UF K	
C31-34			CK73GB1C104K	CHIP C 0.10UF K	
C36			CK73FB1A225K	CHIP C 2.2UF K	
C37-39			CK73GB1H103K	CHIP C 0.010UF K	
C40			CK73GB1H153K	CHIP C 0.015UF K	
C41			CK73GB1H102K	CHIP C 1000PF K	
C42			CK73GB1E473K	CHIP C 0.047UF K	
C43			CK73GB1H222K	CHIP C 2200PF K	
C44			CK73GB1H102K	CHIP C 1000PF K	
C45-47			CK73GB1C104K	CHIP C 0.10UF K	
C48			CK73GB1H682K	CHIP C 6800PF K	
C49			CK73GB1H152K	CHIP C 1500PF K	
C50			CK73GB1H472K	CHIP C 4700PF K	
C51			CK73GB1H681K	CHIP C 680PF K	
C52			CK73GB1C104K	CHIP C 0.10UF K	
C61			CK73FB1A225K	CHIP C 2.2UF K	
C62			CK73GB1C104K	CHIP C 0.10UF K	
C71,72			CK73GB1H471K	CHIP C 470PF K	
C73,74			CC73GCH1H680J	CHIP C 68PF J	
C75,76			CK73GB1H222K	CHIP C 2200PF K	
C77,78			CK73GB1C104K	CHIP C 0.10UF K	
C100-102			CK73GB1H102K	CHIP C 1000PF K	
CN1			E41-2068-05	FLAT CABLE CONNECTOR	
CN1			E41-2085-15	FLAT CABLE CONNECTOR	
CN2			E41-2083-05	FLAT CABLE CONNECTOR	
X1			L78-0851-05	RESONATOR (16.934MHZ)	
CP1			RK74GA1J101J	CHIP-COM 100 J 1/16W	
CP2			RK74GB1J101J	CHIP-COM 100 J 1/16W	
CP3		*	RK74GB1J182J	CHIP-COM 1.8K J 1/16W	
CP4			RK74GB1J472J	CHIP-COM 4.7K J 1/16W	
CP5			RK74GB1J104J	CHIP-COM 100K J 1/16W	
R1			RK73GB2A910J	CHIP R 91 J 1/10W	
R2,3			RK73GB2A562J	CHIP R 5.6K J 1/10W	
R4			RK73FB2B100J	CHIP R 10 J 1/8W	
R5,6			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R7			RK73GB2A362J	CHIP R 3.6K J 1/10W	
R8			RK73GB2A273J	CHIP R 27K J 1/10W	
R9			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R10			RK73GB2A104J	CHIP R 100K J 1/10W	
R11			RK73GB2A333J	CHIP R 33K J 1/10W	
R12			RK73GB2A244J	CHIP R 240K J 1/10W	
R13			RK73GB2A914J	CHIP R 910K J 1/10W	
R14			RK73GB2A104J	CHIP R 100K J 1/10W	
R15			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R31			RK73GB2A273J	CHIP R 27K J 1/10W	
R32			RK73GB2A103J	CHIP R 10K J 1/10W	
R33			RK73GB2A183J	CHIP R 18K J 1/10W	
R34			RK73GB2A103J	CHIP R 10K J 1/10W	
R35			RK73GB2A393J	CHIP R 39K J 1/10W	
R36			RK73GB2A103J	CHIP R 10K J 1/10W	
R37			RK73GB2A622J	CHIP R 6.2K J 1/10W	
R38			RK73GB2A224J	CHIP R 220K J 1/10W	
R39			RK73GB2A104J	CHIP R 100K J 1/10W	

E : KDC-309A E1 : KDC-309G E2 : KDC-F331A E3 : KDC-F331G
E4 : KDC-3031A E5 : KDC-3031G E6 : KDC-3031AY E7 : KDC-3031GY
(E : Europe K : North America M : Other Areas W : Without Europe)

△ Indicates safety critical components.

PARTS LIST

CD PLAYER UNIT (X32-5750-00)

Ref. No.	Add	New	Parts No.	Description	Destination
R40			RK73GB2A821J	CHIP R 820 J 1/10W	
R41			RK73GB2A473J	CHIP R 47K J 1/10W	
R42			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R43			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R44,45			RK73GB2A103J	CHIP R 10K J 1/10W	
R46			RK73GB2A273J	CHIP R 27K J 1/10W	
R47			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R48			RK73GB2A103J	CHIP R 10K J 1/10W	
R49			RK73GB2A473J	CHIP R 47K J 1/10W	
R50			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R51			RK73GB2A103J	CHIP R 10K J 1/10W	
R52,53			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R71			RK73GB2A133J	CHIP R 13K J 1/10W	
R72			RK73FB2B201J	CHIP R 200 J 1/8W	
R81,82			RK73FB2B183J	CHIP R 18K J 1/8W	
R83,84			RK73FB2B203J	CHIP R 20K J 1/8W	
R85,86			RK73FB2B123J	CHIP R 12K J 1/8W	
R87,88			RK73FB2B331J	CHIP R 330 J 1/8W	
R89,90			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R91,92			RK73GB2A562J	CHIP R 5.6K J 1/10W	
R100			RK73GB2A100J	CHIP R 10 J 1/10W	
S1,2			S68-0863-05	PUSH SWITCH	
S3			S68-0862-05	PUSH SWITCH	
D1			DAN202U	DIODE	
D2			MAZS0510L	ZENER DIODE	
D3			DA204U	DIODE	
IC1		*	AN22002A-V	ANALOGUE IC	
IC2			MN6627771KP	MOS-IC	
IC3			BA5824FP-F	ANALOGUE IC	
IC4		*	NJM4580M1-ZB	ANALOGUE IC	
Q1			2SB0970	TRANSISTOR	
Q2			2SA1362(Y)	TRANSISTOR	
Q3			DTC124EUA	DIGITAL TRANSISTOR	
Q4			DTA143XUA	DIGITAL TRANSISTOR	
Q5			2SC4081	TRANSISTOR	
Q6			2SA1576A	TRANSISTOR	
ELECTRIC UNIT (X34-3412-7x)					
D401			B30-1567-05	LED (RED)	
C1,2			CD04AT1HR47M	ELECTRO 0.47UF 50WV	
C3-6			C90-5684-05	ELECTRO 0.22UF 50WV	
C3-6		*	C90-6735-05	ELECTRO 0.22UF 50WV	
C51			C90-5683-05	ELECTRO 3300UF 16WV	E2E3
C51		*	C90-6746-05	ELECTRO 3300UF 16WV	E1E6E7
C51		*	C90-6746-05	ELECTRO 3300UF 16WV	E4E5E
C52,53			CK73GB1H102K	CHIP C 1000PF K	
C54,55			CK73GB1H103K	CHIP C 0.010UF K	
C69			CK73GB1A474K	CHIP C 0.47UF K	
C71			CD04AS1C470M	ELECTRO 47UF 16WV	
C72			CK73GB1H104K	CHIP C 0.10UF K	
C74-77			CK73GB1C104K	CHIP C 0.10UF K	
C78		*	CD04AT1E101M	ELECTRO 100UF 25WV	
C79			CD04AS1A220M	ELECTRO 22UF 10WV	
C80		*	CD04AT1E101M	ELECTRO 100UF 25WV	

Ref. No.	Add	New	Parts No.	Description	Destination
C81			CK73GB1H103K	CHIP C 0.010UF K	
C82			CK73GB1E223K	CHIP C 0.022UF K	
C82			CK73GB1H223K	CHIP C 0.022UF K	
C96			CD04AS1HR47M	ELECTRO 0.47UF 50WV	
C97			CD04AS1C470M	ELECTRO 47UF 16WV	
C112,113			CC73GCH1H100D	CHIP C 10PF D	
C116			CC73GCH1H331J	CHIP C 330PF J	
C117			CD04AS1H2R2M	ELECTRO 2.2UF 50WV	
C118			CK73GB1H103K	CHIP C 0.010UF K	
C119			CD04AS1C100M	ELECTRO 10UF 16WV	
C153			CK73GB0J105K	CHIP C 1.0UF K	
C201			CK73GB1H103K	CHIP C 0.010UF K	
C255			CD04AS1C100M	ELECTRO 10UF 16WV	
C256			CD04AS1H010M	ELECTRO 1UF 50WV	
C257			CD04AT1H010M	ELECTRO 1UF 50WV	
C258			CD04AS1H010M	ELECTRO 1UF 50WV	
C331,332		*	CD04AT1C100M	ELECTRO 10UF 16WV	
C333,334			CC73GCH1H681J	CHIP C 680PF J	
C407			CC73GCH1H220J	CHIP C 22PF J	
C408			CC73GCH1H180J	CHIP C 18PF J	
C409			CD04AS0J101M	ELECTRO 100UF 6.3WV	
C410			CK73GB1H103K	CHIP C 0.010UF K	
C411			CK73GB1A224K	CHIP C 0.22UF K	
C420			CC73GCH1H102J	CHIP C 1000PF J	
C422			CC73GCH1H101J	CHIP C 100PF J	
C502			CK73GB1H152K	CHIP C 1500PF K	
C503			CK73GB1C104K	CHIP C 0.10UF K	
C504			CK73GB1H103K	CHIP C 0.010UF K	
C505			CD04AT1C4R7M	ELECTRO 4.7UF 16WV	
C506			CK73GB1A684K	CHIP C 0.68UF K	
C507,508			CD04AT1A220M	ELECTRO 22UF 10WV	
C509			CC73GCH1H680J	CHIP C 68PF J	
C510			CC73GCH1H101J	CHIP C 100PF J	
C512			CD04AT1C100M	ELECTRO 10UF 16WV	
C513,514			CK73GB1H103K	CHIP C 0.010UF K	
C515			CD04AT1H010M	ELECTRO 1UF 50WV	
C516			CC73GCH1H100D	CHIP C 10PF D	
C517,518			CK73FB1C105K	CHIP C 1.0UF K	
C519,520			CK73FB1C474K	CHIP C 0.47UF K	
C521,522			CC73GCH1H102J	CHIP C 1000PF J	
C524			CC73GCH1H180J	CHIP C 18PF J	
C525			CC73GCH1H150J	CHIP C 15PF J	
C527			CC73GCH1H102J	CHIP C 1000PF J	
C531			CK73FB1C105K	CHIP C 1.0UF K	
C541			CC73GCH1H271J	CHIP C 270PF J	
C542			CC73GCH1H050C	CHIP C 5.0PF C	
C543			CC73GCH1H080D	CHIP C 8.0PF D	
C544			CC73GCH1H150J	CHIP C 15PF J	
C545			CK73GB1H682K	CHIP C 6800PF K	
C547			CD04AT1A220M	ELECTRO 22UF 10WV	
C548			CK73GB1E223K	CHIP C 0.022UF K	
C548			CK73GB1H223K	CHIP C 0.022UF K	
C549			CK73GB1H222K	CHIP C 2200PF K	
C550			CK73GB1E333K	CHIP C 0.033UF K	
C550			CK73GB1H333K	CHIP C 0.033UF K	

PARTS LIST

ELECTRIC UNIT (X34-3412-7x)

Ref. No.	Add	New	Parts No.	Description	Destination
C551			CK73GB1H103K	CHIP C 0.010UF K	
C553			CK73GB1C104K	CHIP C 0.10UF K	
C554			CK73GB1A334K	CHIP C 0.33UF K	
C556			CK73GB1H103K	CHIP C 0.010UF K	
C559			CK73GB1H332K	CHIP C 3300PF K	
C561			CK73FB1H104K	CHIP C 0.10UF K	
C562			CD04AT1A100M	ELECTRO 10UF 10WV	
C563			CD04AT1HR47M	ELECTRO 0.47UF 50WV	
C564			CK73GB1A474K	CHIP C 0.47UF K	
C565			CK73FB1C105K	CHIP C 1.0UF K	
C568			CC73GCH1H271J	CHIP C 270PF J	
C579			CK73GB1H103K	CHIP C 0.010UF K	
C581			CC73GCH1H101J	CHIP C 100PF J	
C582			CK73GB1E223K	CHIP C 0.022UF K	
C582			CK73GB1H223K	CHIP C 0.022UF K	
C583			CK73GB1C683K	CHIP C 0.068UF K	
C583			CK73GB1H683K	CHIP C 0.068UF K	
C584			CD04AT1H010M	ELECTRO 1UF 50WV	
C585			CK73GB1H103K	CHIP C 0.010UF K	
C586			CK73GB0J105K	CHIP C 1.0UF K	
C587			CK73GB1C104K	CHIP C 0.10UF K	
C588			CK73GB1A474K	CHIP C 0.47UF K	
C589			CK73GB1C104K	CHIP C 0.10UF K	
C590			CK73GB1H392K	CHIP C 3900PF K	
C600			CD04AT1A101M	ELECTRO 100UF 10WV	
C601			CK73GB1E223K	CHIP C 0.022UF K	
C601			CK73GB1H223K	CHIP C 0.022UF K	
C602			CC73GCH1H151J	CHIP C 150PF J	
C604			CC73GCH1H470J	CHIP C 47PF J	
C605,606			CC73GCH1H010C	CHIP C 1.0PF C	
C610			CC73GCH1H010C	CHIP C 1.0PF C	
C620			CK73GB1H103K	CHIP C 0.010UF K	
C623,624			CK73GB1H103K	CHIP C 0.010UF K	
C625,626			CC73GCH1H101J	CHIP C 100PF J	
CN2		*	E41-2244-05	FLAT CABLE CONNECTOR	
CN3		*	E41-0941-05	PIN ASSY	
J1		*	E58-0991-05	RECTANGULAR RECEPTACLE	
J4		*	E04-0326-05	RF COAXIAL CABLE RECEPTACLE	
J5		*	E58-0992-05	RECTANGULAR RECEPTACLE	
J6			E63-0898-05	PIN JACK	
P1			E23-0745-05	TERMINAL	
W251			E31-0001-00	JUMPER WIRE	
W300-311			E31-0001-00	JUMPER WIRE	
W313-324			E31-0001-00	JUMPER WIRE	
W326-337			E31-0001-00	JUMPER WIRE	
W339-341			E31-0001-00	JUMPER WIRE	
W345-347			E31-0001-00	JUMPER WIRE	
W349-353			E31-0001-00	JUMPER WIRE	
W355-357			E31-0001-00	JUMPER WIRE	
W361-366			E31-0001-00	JUMPER WIRE	
W368-399			E31-0001-00	JUMPER WIRE	
W401-410			E31-0001-00	JUMPER WIRE	
W412-427			E31-0001-00	JUMPER WIRE	
W801			E31-0001-00	JUMPER WIRE	

Ref. No.	Add	New	Parts No.	Description	Destination
W830			E31-0001-00	JUMPER WIRE	
CF51-53		*	L72-0805-05	CERAMIC FILTER (10.7MHZ)	
CF54		*	L72-0804-05	CERAMIC FILTER (450KHZ)	
L3			L33-1978-05	CHOKE COIL (22UH)	
L4		*	L33-2260-05	CHOKE COIL (52UH)	
L51			L33-1988-05	CHOKE COIL ASSY (140UH)	
L61			L40-4795-91	SMALL FIXED INDUCTOR (4.7UH, J)	
L101			L40-4795-91	SMALL FIXED INDUCTOR (4.7UH, J)	
L501			L40-6891-58	SMALL FIXED INDUCTOR (6.8UH)	
L502			L40-3301-58	SMALL FIXED INDUCTOR (33UH)	
L503			L40-1021-56	SMALL FIXED INDUCTOR (1UH)	
L504			L40-1011-58	SMALL FIXED INDUCTOR (100UH)	
L505		*	L40-3381-58	SMALL FIXED INDUCTOR (0.33UH)	
L506		*	L31-0977-15	FM-RF COIL	
L507		*	L32-0941-15	FM OSCILLATING COIL	
L508		*	L30-0776-15	FM IFT	
L509		*	L30-0777-15	AM IFT	
L518		*	L31-0976-15	FM-RF COIL	
L519		*	L40-4763-72	SMALL FIXED INDUCTOR (4.7NH)	
L520		*	L40-3381-58	SMALL FIXED INDUCTOR (0.33UH)	
L521		*	L40-1073-72	SMALL FIXED INDUCTOR (10NH)	
L600		*	L92-0607-05	CHIP FERRITE	
L601,602			L92-0397-05	CHIP FERRITE	
X1			L78-0879-05	RESONATOR (10.000MHZ)	
X2			L77-2793-05	CRYSTAL RESONATOR (32.768KHZ)	
X3			L77-2002-05	CRYSTAL RESONATOR (4.332MHZ)	
X501			L77-2077-05	CRYSTAL RESONATOR (10.250MHZ)	
F	2D	*	N80-3010-48	PAN HEAD TAPTITE SCREW	
G	2D	*	N83-3005-48	PAN HEAD TAPTITE SCREW	
H	2D	*	N83-3020-48	PAN HEAD TAPTITE SCREW	
J	3D		N86-2606-48	BINDING HEAD TAPTITE SCREW	
R1,2			RK73GB2A101J	CHIP R 100 J 1/10W	
R21			RD14BB2C152J	RD 1.5K J 1/6W	
R51			RK73FB2B683J	CHIP R 68K J 1/8W	
R52			RK73GB2A393J	CHIP R 39K J 1/10W	
R53			RK73GB2A104J	CHIP R 100K J 1/10W	
R54			RK73FB2B203J	CHIP R 20K J 1/8W	
R55,56			RK73GB2A103J	CHIP R 10K J 1/10W	
R57			RK73GB2A223J	CHIP R 22K J 1/10W	
R58			RD14DB2H332J	SMALL-RD 3.3K J 1/2W	
R59			RD14BB2C333J	RD 33K J 1/6W	
R60			RK73GB2A103J	CHIP R 10K J 1/10W	
R61			RK73GB2A223J	CHIP R 22K J 1/10W	
R72,73			RD14BB2C472J	RD 4.7K J 1/6W	
R75-78			RK73GB2A103J	CHIP R 10K J 1/10W	
R81			RD14BB2C103J	RD 10K J 1/6W	
R82			RK73GB2A223J	CHIP R 22K J 1/10W	
R83			RK73GB2A473J	CHIP R 47K J 1/10W	
R85			RK73GB2A1R0J	CHIP R 1.0 J 1/10W	
R86			RK73EB2E1R0J	CHIP R 1.0 J 1/4W	
R87,88			RK73GB2A1R0J	CHIP R 1.0 J 1/10W	
R90			RK73GB2A1R0J	CHIP R 1.0 J 1/10W	
R96			RK73GH2A273D	CHIP R 27K D 1/10W	

E : KDC-309A E1 : KDC-309G E2 : KDC-F331A E3 : KDC-F331G
E4 : KDC-3031A E5 : KDC-3031G E6 : KDC-3031AY E7 : KDC-3031GY
(E : Europe K : North America M : Other Areas W : Without Europe)

△ Indicates safety critical components.

PARTS LIST

ELECTRIC UNIT (X34-3412-7x)

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
R97		*	RK73GH2A332D	CHIP R 3.3K D 1/10W		R416-418			RK73GB2A223J	CHIP R 22K J 1/10W	E4EE2
R98			RK73EB2E102J	CHIP R 1.0K J 1/4W		R416-418			RK73GB2A223J	CHIP R 22K J 1/10W	E6
R99			RK73GB2A104J	CHIP R 100K J 1/10W		R417,418			RK73GB2A223J	CHIP R 22K J 1/10W	E5E1E3
R100			RK73GB2A272J	CHIP R 2.7K J 1/10W		R417,418			RK73GB2A223J	CHIP R 22K J 1/10W	E7
R112-114			RK73GB2A222J	CHIP R 2.2K J 1/10W		R431			RK73GB2A223J	CHIP R 22K J 1/10W	
R130,131			RK73EB2E4R7J	CHIP R 4.7 J 1/4W		R432			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R133			RK73EB2E4R7J	CHIP R 4.7 J 1/4W		R433			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R135-140			RK73EB2E4R7J	CHIP R 4.7 J 1/4W		R435,436			RK73GB2A103J	CHIP R 10K J 1/10W	
R141			RK73EB2E2R2J	CHIP R 2.2 J 1/4W		R437,438			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R152			RK73EB2E100J	CHIP R 10 J 1/4W		R439			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R153			RK73EB2E471J	CHIP R 470 J 1/4W		R440,441			RK73GB2A473J	CHIP R 47K J 1/10W	
R156,157			RK73EB2E102J	CHIP R 1.0K J 1/4W		R453			RK73GB2A473J	CHIP R 47K J 1/10W	
R158			RK73EB2E101J	CHIP R 100 J 1/4W		R454			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R159			RK73EB2E102J	CHIP R 1.0K J 1/4W		R456			RK73GB2A104J	CHIP R 100K J 1/10W	
R160,161			RK73EB2E471J	CHIP R 470 J 1/4W		R457			RK73GB2A103J	CHIP R 10K J 1/10W	
R162			RK73EB2E102J	CHIP R 1.0K J 1/4W		R470			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R163			RK73EB2E471J	CHIP R 470 J 1/4W		R501			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R164			RK73EB2E102J	CHIP R 1.0K J 1/4W		R502,503			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R172			RD14BB2C102J	RD 1.0K J 1/6W		R504			RK73GB2A4R7J	CHIP R 4.7 J 1/10W	
R178			RK73EB2E471J	CHIP R 470 J 1/4W		R505			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R180,181			RK73GB2A471J	CHIP R 470 J 1/10W		R506			RK73GB2A105J	CHIP R 1.0M J 1/10W	
R182			RK73GB2A222J	CHIP R 2.2K J 1/10W		R507			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R190			RK73GB2A104J	CHIP R 100K J 1/10W		R520			RK73GB2A221J	CHIP R 220 J 1/10W	
R191			RK73GB2A225J	CHIP R 2.2M J 1/10W		R521			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R193,194			RK73GB2A474J	CHIP R 470K J 1/10W		R522			RK73GB2A223J	CHIP R 22K J 1/10W	
R199			RK73GB2A241J	CHIP R 240 J 1/10W		R543			RK73GB2A562J	CHIP R 5.6K J 1/10W	
R200			RK73GB2A102J	CHIP R 1.0K J 1/10W		R544			RD14BB2C222J	RD 2.2K J 1/6W	
R251			RK73GB2A154J	CHIP R 150K J 1/10W		R545			RK73GB2A333J	CHIP R 33K J 1/10W	
R252			RK73GB2A473J	CHIP R 47K J 1/10W		R546			RK73GB2A432J	CHIP R 4.3K J 1/10W	
R253			RK73GB2A432J	CHIP R 4.3K J 1/10W		R561			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R254			RK73GB2A100J	CHIP R 10 J 1/10W		R562			RK73GB2A106J	CHIP R 10M J 1/10W	
R255			RK73GB2A331J	CHIP R 330 J 1/10W		R565			RK73GB2A394J	CHIP R 390K J 1/10W	
R256			RK73GB2A154J	CHIP R 150K J 1/10W		R566,567			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R257			RK73GB2A123J	CHIP R 12K J 1/10W		R589			RK73GB2A473J	CHIP R 47K J 1/10W	
R271			RK73GB2A101J	CHIP R 100 J 1/10W		R590			RK73GB2A103J	CHIP R 10K J 1/10W	
R272			RK73GB2A103J	CHIP R 10K J 1/10W		R591			RK73GB2A513J	CHIP R 51K J 1/10W	
R273			RK73GB2A474J	CHIP R 470K J 1/10W		R592			RK73GB2A223J	CHIP R 22K J 1/10W	
R331,332			RK73GB2A271J	CHIP R 270 J 1/10W		R594			RK73EB2E100J	CHIP R 10 J 1/4W	
R335,336			RK73GB2A303J	CHIP R 30K J 1/10W		R595-597			RD14BB2C100J	RD 10 J 1/6W	
R338,339			RD14BB2C101J	RD 100 J 1/6W		R599			RK73GB2A220J	CHIP R 22 J 1/10W	
R351,352			RK73GB2A222J	CHIP R 2.2K J 1/10W		R600			RD14BB2C2R2J	RD 2.2 J 1/6W	
R353			RK73GB2A102J	CHIP R 1.0K J 1/10W		R601			RD14BB2C1R0J	RD 1.0 J 1/6W	
R355,356			RK73GB2A102J	CHIP R 1.0K J 1/10W		R602			RK73GB2A122J	CHIP R 1.2K J 1/10W	
R358			RK73GB2A222J	CHIP R 2.2K J 1/10W		R603			RK73GB2A560J	CHIP R 56 J 1/10W	
R359			RK73GB2A101J	CHIP R 100 J 1/10W		R604,605			RK73GB2A100J	CHIP R 10 J 1/10W	
R360			RK73GB2A222J	CHIP R 2.2K J 1/10W		W51			R92-1252-05	CHIP R 0 OHM J 1/16W	
R363			RD14BB2C472J	RD 4.7K J 1/6W		W52			R92-2053-05	CHIP R 0 OHM J 1/8W	
R365			RK73GB2A472J	CHIP R 4.7K J 1/10W		W53			R92-1252-05	CHIP R 0 OHM J 1/16W	
R366			RK73EB2E472J	CHIP R 4.7K J 1/4W		W57			R92-2053-05	CHIP R 0 OHM J 1/8W	
R367			RK73GB2A104J	CHIP R 100K J 1/10W		W58-60			R92-1252-05	CHIP R 0 OHM J 1/16W	
R368,369			RK73GB2A471J	CHIP R 470 J 1/10W		W61-63			R92-2053-05	CHIP R 0 OHM J 1/8W	
R370,371			RK73GB2A472J	CHIP R 4.7K J 1/10W		W64			R92-1252-05	CHIP R 0 OHM J 1/16W	
R412,413			RK73GB2A223J	CHIP R 22K J 1/10W		W65,66			R92-2053-05	CHIP R 0 OHM J 1/8W	
R415			RK73GB2A223J	CHIP R 22K J 1/10W	E5E1E3	W67-71			R92-1252-05	CHIP R 0 OHM J 1/16W	
R415			RK73GB2A223J	CHIP R 22K J 1/10W	E7	W72			R92-2053-05	CHIP R 0 OHM J 1/8W	

PARTS LIST

ELECTRIC UNIT (X34-3412-7x)

Ref. No.	Add	New	Parts No.	Description	Destination
W73			R92-1252-05	CHIP R 0 OHM J 1/16W	
W75			R92-2053-05	CHIP R 0 OHM J 1/8W	
W76			R92-1252-05	CHIP R 0 OHM J 1/16W	
W78			R92-2053-05	CHIP R 0 OHM J 1/8W	
W79,80			R92-1252-05	CHIP R 0 OHM J 1/16W	
W81,82			R92-2053-05	CHIP R 0 OHM J 1/8W	
W83			R92-1252-05	CHIP R 0 OHM J 1/16W	
W85			R92-2053-05	CHIP R 0 OHM J 1/8W	
W86			R92-1252-05	CHIP R 0 OHM J 1/16W	
W87			R92-2053-05	CHIP R 0 OHM J 1/8W	
W88,89			R92-1252-05	CHIP R 0 OHM J 1/16W	
W90,91			R92-2053-05	CHIP R 0 OHM J 1/8W	
W92			R92-1252-05	CHIP R 0 OHM J 1/16W	
W93,94			R92-2053-05	CHIP R 0 OHM J 1/8W	
W96-98			R92-1252-05	CHIP R 0 OHM J 1/16W	
W99			R92-2053-05	CHIP R 0 OHM J 1/8W	
W102			R92-2053-05	CHIP R 0 OHM J 1/8W	
W506			R92-2053-05	CHIP R 0 OHM J 1/8W	
W604,605			R92-1252-05	CHIP R 0 OHM J 1/16W	
W611			R92-1252-05	CHIP R 0 OHM J 1/16W	
W802			R92-1252-05	CHIP R 0 OHM J 1/16W	
W804-807			R92-1252-05	CHIP R 0 OHM J 1/16W	
W808			R92-2053-05	CHIP R 0 OHM J 1/8W	
W810			R92-1252-05	CHIP R 0 OHM J 1/16W	
W812			R92-2053-05	CHIP R 0 OHM J 1/8W	
W814			R92-2053-05	CHIP R 0 OHM J 1/8W	
W820			R92-2053-05	CHIP R 0 OHM J 1/8W	
W823			R92-1252-05	CHIP R 0 OHM J 1/16W	
W826			R92-2053-05	CHIP R 0 OHM J 1/8W	
D3			IMS A-6801-E	SURGE ABSORBER	
D52			MAZ4068N-M	ZENER DIODE	
D53			UDZS6.8B	ZENER DIODE	
D53		*	02DZ6.8F-Y	ZENER DIODE	
D54			MAZ4068N-M	ZENER DIODE	
D55			1SS355	DIODE	
D57			S2V60*A	DIODE	
D71			MAZ4082N-L	ZENER DIODE	
D72			D1F60-5063	DIODE	
D72			1SR154-400	DIODE	
D73			AM01ZNF	DIODE	
D73		*	10EDA20	DIODE	
D74,75			D1F60-5063	DIODE	
D74,75			1SR154-400	DIODE	
D76			DAN202U	DIODE	
D76		*	KDS121-P	DIODE	
D76		*	MC2848	DIODE	
D77			AM01ZNF	DIODE	
D77		*	10EDA20	DIODE	
D81			UDZS4.7B	ZENER DIODE	
D81			02DZ4.7F-Y	ZENER DIODE	
D162			MAZ4062-L	ZENER DIODE	
D203			1SS133	DIODE	
D259			1SS133	DIODE	
D261			1SS355	DIODE	

Ref. No.	Add	New	Parts No.	Description	Destination
D402,403			DAN202U	DIODE	
D402,403		*	KDS121-P	DIODE	
D402,403		*	MC2848	DIODE	
D501			RN739F	DIODE	
D502,503		*	KP2311ETR-G	DIODE	
D504		*	KV1430STL-G	VARIABLE CAPACITANCE DIODE	
D506		*	HVC383B-E	VARIABLE CAPACITANCE DIODE	
IC1			784225GC257A	MICROCONTROLLER IC	
IC3		*	BD4912-V4	ANALOGUE IC	
IC4		*	TB2904HQ	ANALOGUE IC	
IC6			TC7W02FU-F	MOS-IC	
IC7			E-TDA7479AD	ANALOGUE IC	
IC8		*	S-80836CNNB-G	MOS-IC	
IC10		*	E-TDA7516	ANALOGUE IC	
IC11		*	BR24L04FV-W	ROM IC	
IC15		*	BA00CCWT	ANALOGUE IC	
Q51-53			2SC4081	TRANSISTOR	
Q71			UMC2N	TRANSISTOR	
Q72			2SB1565(E,F)	TRANSISTOR	
Q73			2SD1858	TRANSISTOR	
Q74			UMC2N	TRANSISTOR	
Q151			DTA114YUA	DIGITAL TRANSISTOR	
Q151		*	KRA307-P	DIGITAL TRANSISTOR	
Q151			RT1P144M	TRANSISTOR	
Q155			2SC4081	TRANSISTOR	
Q252		*	KTA2014P(Y,GR)	TRANSISTOR	
Q252			2SA1576A	TRANSISTOR	
Q252		*	2SA1603A	TRANSISTOR	
Q330			DTA124EUA	DIGITAL TRANSISTOR	
Q330		*	KRA303-P	DIGITAL TRANSISTOR	
Q330		*	RT1P241M	TRANSISTOR	
Q351,352		*	DTC143TUA	DIGITAL TRANSISTOR	
Q351,352		*	KRC410-P	DIGITAL TRANSISTOR	
Q351,352		*	RT1N430M	TRANSISTOR	
Q501		*	HN3G01J(BL)-F	TRANSISTOR	
TH1			PRF21BE471QB2	POSITIVE RESISTOR	
MECHANISM UNIT (X92-5090-00)					
2	1B		A10-4827-32	CHASSIS	
5	1B		D10-4576-83	ARM ASSY	
8	2A		D10-4579-23	LEVER ASSY	
10	2A		D10-4581-13	ARM	
11	2A		D10-4582-13	ARM	
12	3A		D10-4583-03	ARM	
13	3A		D10-4584-03	ARM	
14	3B		D10-4585-03	ARM	
15	2A		D10-4586-13	SLIDER	
16	3B		D10-4587-52	SLIDER	
17	2B		D10-4588-13	SLIDER	
18	2B		D10-4595-04	ARM	
19	2B		D10-4596-24	ARM	
22	2A		D13-2151-04	GEAR	
23	2B		D13-2152-04	GEAR	
24	3B		D13-2153-04	GEAR	

E : KDC-309A E1 : KDC-309G E2 : KDC-F331A E3 : KDC-F331G
E4 : KDC-3031A E5 : KDC-3031G E6 : KDC-3031AY E7 : KDC-3031GY
(E : Europe K : North America M : Other Areas W : Without Europe)

△ Indicates safety critical components.

PARTS LIST

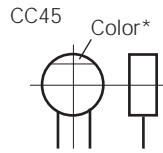
MECHANISM UNIT (X92-5090-00)

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
25	3B		D13-2154-04	GEAR							
26	3B		D13-2155-04	WORM							
27	2B		D13-2156-14	GEAR							
28	3B		D13-2157-04	GEAR							
29	2B		D13-2158-04	GEAR							
30	2B		D13-2168-04	GEAR							
31	3B		D13-2171-04	GEAR							
32	1B		D13-2172-13	RACK (GEAR)							
33	2A		D14-0759-04	ROLLER							
35	2B		D21-2382-04	SHAFT							
36	1A		D23-0954-04	RETAINER							
37	1B		D39-0246-05	DAMPER							
38	2B		G01-3072-04	EXTENSION SPRING							
39	2A		G01-3073-04	TORSION COIL SPRING							
40	2A		G01-3074-04	EXTENSION SPRING							
41	1B		G01-3075-14	EXTENSION SPRING							
42	2A		G01-3076-04	EXTENSION SPRING							
43	1B		G01-3077-14	EXTENSION SPRING							
44	2B		G02-1399-04	FLAT SPRING							
45	2B		G02-1408-04	FLAT SPRING							
51	1A		J21-9676-32	MOUNTING HARDWARE							
52	3B		J21-9677-22	MOUNTING HARDWARE							
53	1B		J21-9678-13	MOUNTING HARDWARE							
55	1A		J90-1001-11	GUIDE							
56	1B		J90-1023-03	GUIDE							
DFPC1	3A		J84-0141-05	FLEXIBLE PRINTED WIRING BOARD							
A	2B		N09-4460-05	TAPTITE SCREW (OVAL P TAPTIT)							
B	1B		N09-4472-15	MACHINE SCREW (M1.7X8.0)							
C	2B		N09-6004-05	MACHINE SCREW (M1.7X2.5 IB-L)							
E	2B		N09-6007-05	MACHINE SCREW (PAN M2X2)							
F	1A		N09-6051-05	TAPTITE SCREW (BIND P 2X5)							
G	2A		N19-2163-04	FLAT WASHER							
H	1B		N39-2020-46	PAN HEAD MACHINE SCREW							
J	1B		N09-6108-05	MACHINE SCREW (M2*3.5)							
K	3B		N09-6155-05	SEMS (TAPTITE SCREW) (PT2X6)							
DM1	3B		T42-1066-04	DC MOTOR (SPINDLE)							
DM2	2B		T42-1067-04	DC MOTOR (LOADING)							
DPU1	2B		X93-2010-00	OPTICAL PICKUP ASSY							

CAPACITORS

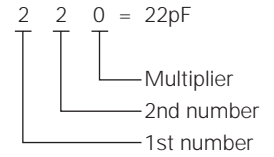
CC 45 TH 1H 220 J
1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc.
- 2 = Shape ... round, square, etc.
- 3 = Temp. coefficient
- 4 = Voltage rating
- 5 = Value
- 6 = Tolerance



• Capacitor value

- 010 = 1pF
- 100 = 10pF
- 101 = 100pF
- 102 = 1000pF = 0.001μF
- 103 = 0.01μF



• Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = -470±60ppm/°C

• Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40 -20	+80 -20	+100 -0	More than 10μF : -10~+50 Less than 4.7μF : -10~+75

(Less than 10pF)

Code	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

• Voltage rating

2nd word \ 1st word	A	B	C	D	E	F	G	H	J	K	V
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	-
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	-
3	1000	1250	1600	2000	2500	2150	4000	5000	6300	8000	-

CHIP CAPACITORS

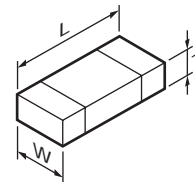
(EX) CC 73 F SL 1H 000 J
1 2 3 4 5 6 7
(Chip) (CH, RH, UJ, SL)

(EX) CK 73 F F 1H 000 Z
1 2 3 4 5 6 7
(Chip) (B, F)

Refer to the table above.

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

• Dimension



Chip capacitor

Code	L	W	T
Empty	5.6±0.5	5.0±0.5	Less than 2.0
A	4.5±0.5	3.2±0.4	Less than 2.0
B	4.5±0.5	2.0±0.3	Less than 2.0
C	4.5±0.5	1.25±0.2	Less than 1.25
D	3.2±0.4	2.5±0.3	Less than 1.5
E	3.2±0.2	1.6±0.2	Less than 1.25
F	2.0±0.3	1.25±0.2	Less than 1.25
G	1.6±0.2	0.8±0.2	Less than 1.0
H	1.0±0.05	0.5±0.05	0.5±0.05

Chip resistor

Code	L	W	T
E	3.2±0.2	1.6±0.2	1.0
F	2.0±0.3	1.25±0.2	1.0
G	1.6±0.2	0.8±0.2	0.5±0.1
H	1.0±0.05	0.5±0.05	0.35±0.05

RESISTORS

• Chip resistor (Carbon)

(EX) RD 73 E B 2B 000 J
1 2 3 4 5 6 7
(Chip) (B, F)

• Carbon resistor (Normal type)

(EX) RD 14 B B 2C 000 J
1 2 3 4 5 6 7
(Chip) (B, F)

- 1 = Type ... ceramic, electrolytic, etc.
- 2 = Shape ... round, square, etc.
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

• Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

SPECIFICATIONS

FM

Frequency Range (Frequency Step)
..... 87.5MHz~108.0MHz (50kHz)
Usable Sensitivity (S/N : 26dB) 0.7 μ V/75 Ω
Quieting Sensitivity (S/N : 46dB) 1.6 μ V/75 Ω
Frequency Response (\pm 3.0dB) 30Hz~15kHz
S/N 65dB (MONO)
Selectivity (DIN) \geq 80dB (\pm 400kHz)
Stereo Separation 35dB (1kHz)

MW (AM)

Frequency Range (Frequency Step)
..... 531kHz~1611kHz (9kHz)
Usable Sensitivity (S/N : 20dB) 25 μ V

LW

Frequency Range 153kHz~281kHz
Usable Sensitivity (S/N : 20dB) 45 μ V

CD

Laser Diode GaAlAs
Digital Filter (D/A) 8 Times Over Sampling
D/A Converter 1 Bit
Spindle Speed 500rpm~200rpm (CLV)
Wow & Flutter Below Mesurable Limit
Frequency Response 10Hz~20kHz (\pm 1dB)
Total Harmonic Distortion 0.01% (1kHz)
S/N Ratio 93dB (1kHz)
Dynamic Range 93dB
Channel Separation 85dB

Preout Level / Load 2000mV/10k Ω (CD)
Preout Impedance \leq 600 Ω

AMPLIFIER

Maximum Power
KDC-3031A/3031AY/3031G/3031GY/309A/309G
..... 50W x 4
KDC-F331A/F331G 45W x 4
Power (DIN45324, +B=14.4V)
KDC-3031A/3031AY/3031G/3031GY/309A/309G
..... 30W x 4
KDC-F331A/F331G 28W x 4

STONE

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

GENERAL

Operating Voltage (11V~16V allowable) 14.4V
Current Consumption 10A
Installation Size (Width) 182mm
(Height) 53mm
(Depth) 155mm
Weight 1.40kg (3.1 lbs)

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

KENWOOD CORPORATION

2967-3, Ishikawa-machi, Hachioji-shi, Tokyo, 192-8525 Japan

KENWOOD USA CORPORATION
P.O. Box 22745, 2201 East Dominguez Street, Long Beach, CA 90801-5745, U.S.A.

KENWOOD ELECTRONICS CANADA INC.
6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD ELECTRONICS LATIN AMERICA S.A.
P.O. Box 55-2791, Paitilla Plaza Credicorp Bank Panama Piso #9,
Oficina #901 Calle 50, Panama, Rep. De Panama

KENWOOD ELECTRONICS BRASIL LTDA.
Alameda Ministro Rocha Azevedo No. 456 Edificio Jaú,
10° Andar Cerqueira César, Cep 01410-001 São Paulo, SP, Brasil

KENWOOD ELECTRONICS UK LTD.
Kenwood House, Dwight Road, Watford, Herts, WD18 9EB, United Kingdom

KENWOOD ELECTRONICS DEUTSCHLAND GMBH
Rembrücker Str. 15, 63150 Heusenstamm, Germany

KENWOOD ELECTRONICS FRANCE S.A.
13, Boulevard Ney, 75018 Paris, France

KENWOOD ELECTRONICS BELGIUM N.V.
Leuvensesteenweg 248J, B-1800 Vilvoorde, Belgium

KENWOOD ELECTRONICS ITALIA S.p.A.
Via G. Sirtori 7/9, 20129 Milano, Italy

KENWOOD IBÉRICA S.A.
Bolivia, 239-08020 Barcelona, Spain

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD.
(A.C.N. 001 499 074)
16 Giffnock Avenue, Centrecourt Estate, North Ryde, N.S.W. 2113, Australia

KENWOOD ELECTRONICS (HONG KONG) LTD.
Unit No. 3712-3724, Tower 1, Metroplaza, No. 223 Hing Fong Road, Kwai Fong, N.T., Hong Kong

KENWOOD ELECTRONICS GULF FZE
P.O. Box 61318, Jebel Ali, Dubai, U.A.E.

KENWOOD ELECTRONICS (THAILAND) CO., LTD.
2nd Floor, 956 Udom Vidhya Building, Rama IV Road, Silom, Bangrak, Bangkok 10500, Thailand

KENWOOD ELECTRONICS SINGAPORE PTE LTD.
1 Ang Mo Kio Street 63, Singapore 569110

KENWOOD ELECTRONICS MALAYSIA SDN BHD
#4.01 Level 4, Wisma Academy Lot 4A, Jalan 19/1,
46300 Petaling Jaya, Selangor, Malaysia

